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### Undergraduate Catalogue 1971-1973

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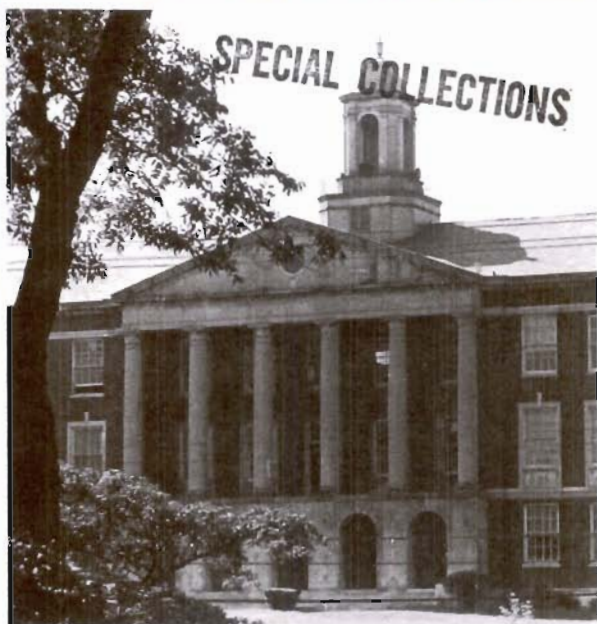
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**BULLETIN**  
**1971-1973**

**TENNESSEE STATE UNIVERSITY**  
NASHVILLE, TENNESSEE



tsu









## ACCREDITATION AND MEMBERSHIP

Tennessee State University is fully accredited by the Southern Association of Colleges and Schools. In addition the specialized programs in teacher education, music, social welfare, Civil Engineering, Electrical Engineering, and Extension are fully approved by their respective professional associations. The institution is also a member of the Association of Land-Grant Colleges and Universities, the Teachers College Association of Extension and Field Services, the Association of American Colleges, the Tennessee College Association, the American Association of Colleges for Teacher Education, the American Alumni Council, the American Council on Education, the National Collegiate Athletic Association and the National Association for Equal Opportunity in Higher Education.

# **announcements**

## **1971-1973**

### **CATALOG**

#### **UNDERGRADUATE**

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**VOL. 1 NO. 1 MARCH 1971**

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Undergraduate Catalog may be obtained from the Office of Admissions and Records.

Graduate Catalog is published under separate cover and may be obtained from the Graduate School Office.



**Published Bi-Annually by**  
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## HOW TO USE THIS CATALOG

The first few weeks of your university experience may well be the most confusing and hectic. You'll just begin learning your way around campus, choosing a course of study, paying expenses, and making many important decisions. The Tennessee State University Catalog will be one of the most important problem solvers which you'll have; therefore you should know how to use it effectively.

You'll find the catalog an important tool in answering some of your immediate questions and you'll also refer to it many times in the next few years for answers to questions concerning degree requirements.

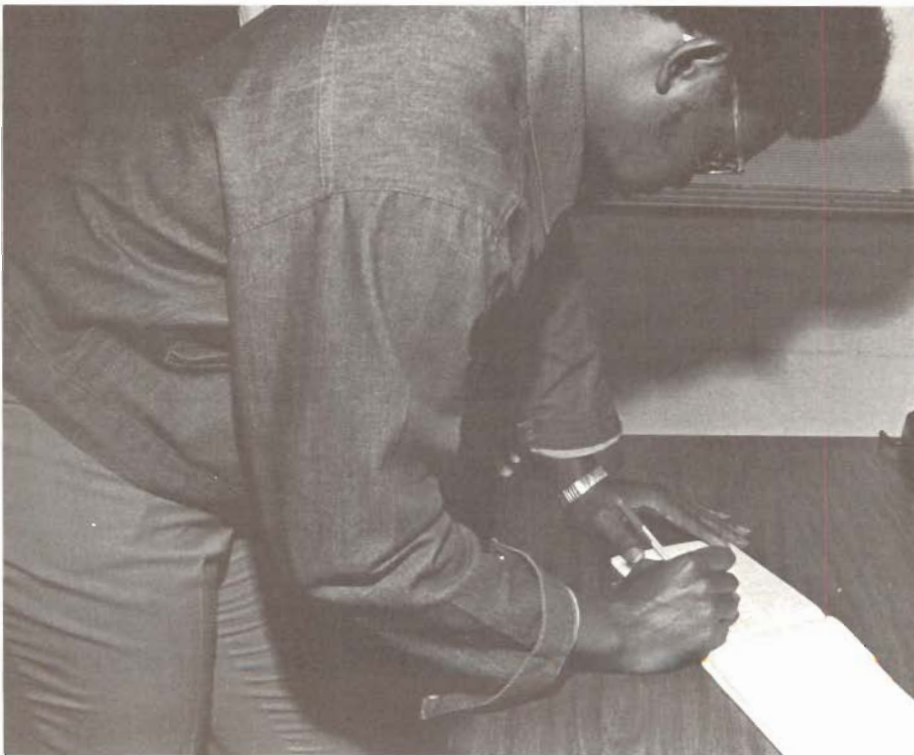
First, you should thoroughly familiarize yourself with the General Information section of the catalog before doing anything else. This section provides you the answers to questions concerning location and facilities of the University, requirements for admission and how to apply, financial aid information, campus life concerning student services and information, housing, regulations, academic programs, credits, grades, etc.

Then, if you know what area of study you are interested in, such as political science, psychology, mathematics, English, or business, turn to that particular section for information about its facilities and degree requirement listings. Also in this section, you can find out what courses are offered by the college in your field and a brief description of each.

The schools are listed in alphabetical order, each with its course listings by department and course number.

If you are undecided about what major field of study to pursue, you should enroll in the School of Arts and Sciences. Here you can take a broad range of liberal arts courses which will prepare you for a variety of majors. By your junior year you should have decided upon your major field of study.

Your primary guide to the catalog will be the Table of Contents. For anything you can't find in the Contents, look in the Index. The Index provides a more specific guide to the catalog. For terms which you do not understand, look in the Glossary. Major events, holidays, and quarterly schedules are listed in the University Calendar.





## GLOSSARY

**Accreditation:** Recognition granted schools and colleges upon examination by groups of visiting professionals based upon objective standards developed by interested professional agencies. An accredited school or college has measured up to the standards of quality imposed by professional groups and accrediting agencies.

**Curriculum:** The total program of courses required for a degree in a particular subject.

**Credit Hours:** The number of hours a course meets each week determines its worth in credit hours.

**Elective:** A course that is accepted toward fulfillment of credit for a degree but is not required for that degree. So termed because a student "elects" or chooses to take the course.

**Evaluation:** Any credit for academic work completed at another institution and transferred to TSU must be evaluated in terms of the requirements of TSU. Such evaluation is done by the Office of Admissions.

**Full-time Student:** A student who registers for 12 or more quarter hours each quarter.

**Grade-point Average:** Any student's grade-point average may be computed numerically by dividing the number of quality points earned by the number of hours of coursework in which he is enrolled over any given period.

**Major:** Your major is the academic area in which you specialize. New students may choose a major at once or be classified as "undecided" until they are able to decide on the major they desire.

**Matriculation:** Enrollment in the University or in a particular college or school. This includes payment of fees.

**Minor:** Your minor is the academic area in which you place special emphasis as a secondary specialization.

**Non-resident:** A student who is not a resident of the State of Tennessee.

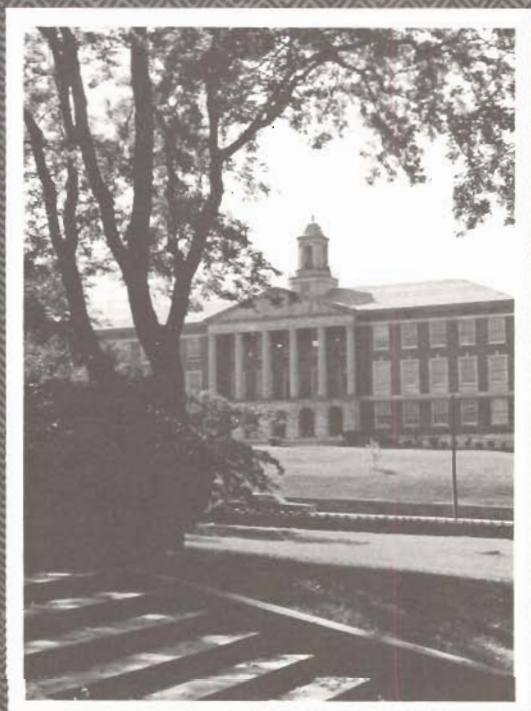
**Part-time Student:** A student who registers for less than 12 credit hours a quarter.

**Prerequisite:** Certain courses must be completed before others may be attempted. Such first courses are said to be prerequisites for following courses in the same or similar areas. It is the student's responsibility to check for prerequisites in the current bulletin.

**Quarter Hour of Credit:** The quarter hour is a unit of academic credit. Students, for example, must earn 198 units or quarter hours in order to graduate. The number of hours earned in a given quarter is the measure of a student's academic load. A normal load ranges from 12 to 18 quarter hours of work. The hours of credit of various courses are indicated in the catalog.

**Transcript of Credit:** A certified copy of credits which a student has earned in high school or in other colleges attended. The submission of a transcript is one of the most important prerequisites for admission to the University.





## **GENERAL INFORMATION**



## THE UNIVERSITY

### Historical Statement

Agricultural and Industrial State Normal School at Nashville was opened on June 19, 1912, under an act of the General Assembly of 1909, which authorized the establishment of the State Normal Schools of Tennessee.

In 1922, the institution was raised to the status of a four-year teachers college and was empowered to grant the bachelor's degree. The first degrees were granted in June, 1924. During the same year, the institution became known as the Agricultural and Industrial State Normal College; and in 1927, "Normal" was dropped from the name of the College.

The General Assembly of 1941 authorized the State Board of Education to upgrade substantially the education program of the College which included the establishment of graduate studies leading to the master's degree. Graduate curricula were first offered in several branches of teacher education. The first master's degree was awarded by the College in June, 1944.

In August, 1951, the institution was granted university status by approval of the State Board of Education. The reorganization of the institution's educational program included the establishment of the Graduate School, the School of Arts and Sciences, the School of Education, and the School of Engineering. Provisions were also made for adding schools later, respectively in agriculture, business and home economics.

The University was elevated to a full fledged Land-Grant University by the State Board of Education in August 1958. The Land-Grant University program as approved by the State Board of Education, August, 1958, includes: A School of Agriculture and Home Economics, School of Engineering, School of Arts and Sciences, School of Education, Graduate School, Division of Business, Division of Extension and Continuing Education, and Department of Aerospace Studies.

The University is supported from the State and Federal funds; the latter in accordance with the Morrill and other Federal Acts which provide funds for land-grant institutions.

### PURPOSE OF THE UNIVERSITY

Tennessee State University is a land-grant institution and, hence considers instruction, research, and service to be its mandates. It proposes to make a maximum contribution to the advancement of all who seek and can profit from its broad educational program, which includes liberal, professional, and vocational offerings.

The purpose of the University is to stimulate the student to reach his full potential through a respect for inquiry and an understanding of the cultural tradition of which he is a part; to go forth to imbue others with a desire to develop basic knowledge and skills that will allow them to make their way in a practical world; to develop the leadership urgently needed for continuing advancement of the society; and finally, to enlarge the major bodies of knowledge and to direct their application toward improving the quality of life for citizens of the State and nation.

More specifically, the University aims:

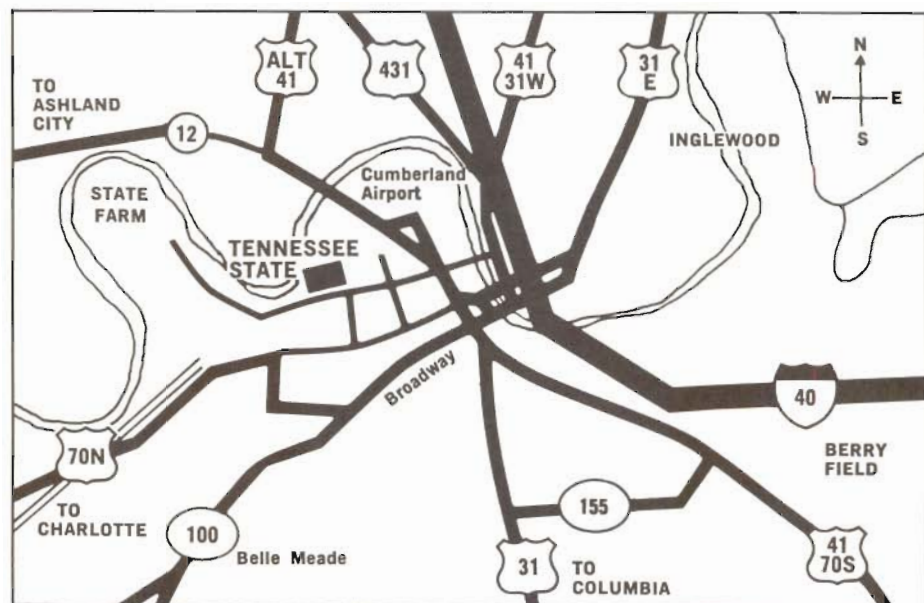
1. To maintain high standards of instruction in general or basic education and in the curricula and fields of specialization through which degree programs are offered.
2. To encourage faculty and students to engage in research and to advance knowledge in the subject matter areas with which the various departments and divisions are concerned.
3. To assume its role as a servant and leader of the citizens of the State by disseminating knowledge and providing a variety of educational services to the community.
4. To identify and develop the talents of students whose prior educational, socioeconomic and cultural disadvantage have prevented their being prepared fully to pursue college work successfully without special assistance.
5. To provide an atmosphere permeated by a spirit of community and a desire to apply knowledge and skills toward the betterment of humanity and the society.

Tennessee State University, in attempting to achieve its objectives, projects itself to the students, faculty, alumni, and community through the motto: "Think, Work, Serve." This motto, practically as old as the University itself, continues as a guide for promotion of the institution's efforts.

## THE CAMPUS

The University is located in northwest Nashville, with the central campus on Centennial Boulevard at 35th Avenue. Its campus, farm lands and pastures occupy 450 acres of scenic rolling grounds and fertile fields extending to the southwest banks of the Cumberland River.

The central campus consists of more than thirty permanent modern buildings in a landscape design that rivals the most beautiful campuses in the South.



## MAJOR BUILDINGS

The Administration Building is located on the south campus near Centennial Boulevard between 35th and 36th Avenues. It contains the chief administrative offices, the computer center, the general auditorium, which accommodates approximately one thousand persons, the Little Theatre for student productions in drama, and a swimming pool. In 1967 the building was renovated and enlarged. It is completely air conditioned.

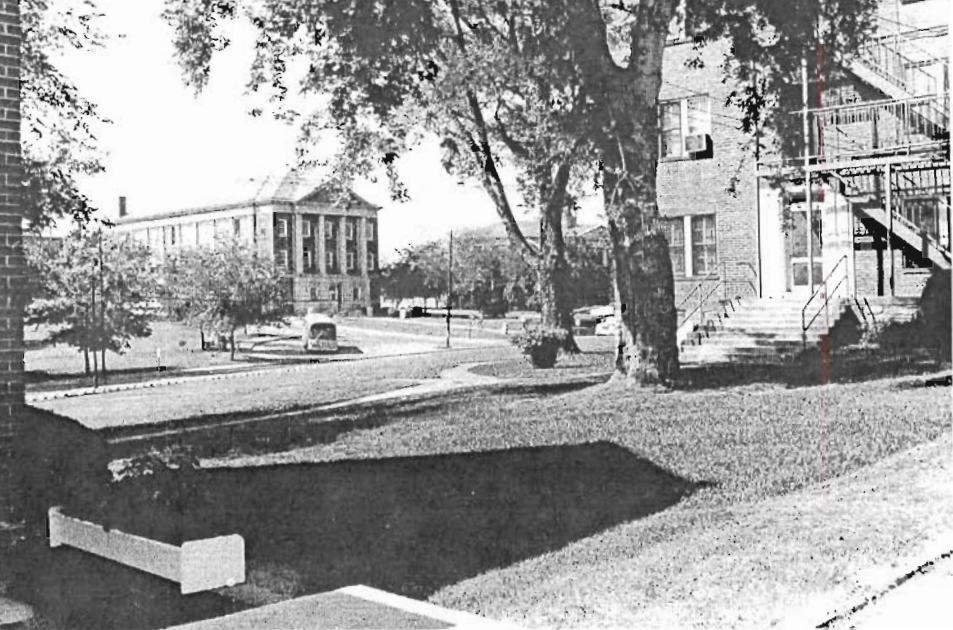
The Martha M. Brown Memorial Library, erected in 1927 and enlarged and modernized in 1950, is located near the center of the main campus on the north side of Centennial Boulevard. The present structure has a total capacity of 120,000 volumes and provides special rooms and facilities for undergraduate and graduate studies, conference and seminar rooms, lounges and other accommodations for the faculty and staff.

The Harned Hall of Science, erected in 1927, is located on the north campus, east of the library. It provides classrooms, lecture auditoriums, modernly equipped laboratories, staff offices and other facilities for instruction and research in the biological sciences.

The Jim Nance McCord Building, erected in 1950, is located on 35th Avenue, North, near Centennial Boulevard. Its modern laboratories contain equipment for instruction and research in mechanics, combustion, electronics, foundry, hydraulics, building and construction, and civil engineering. Other accommodations include a lecture auditorium, classrooms, and offices.

The Industrial Building is located on the south side of the campus at Centennial Boulevard and 35th Avenue. It contains a variety of modernly equipped laboratories, shops, and classrooms and metal work, plumbing, welding, refrigeration, radio, electricity, business (education and administration), and science education. Several instructional staff offices are also located in this building.





The Mechanical Engineering Building, erected in 1950, is situated on the northwest campus. It contains a modern heating plant, laboratories and offices for instruction in stationary engineering.

The Jane E. Elliott Building is located west of the University library on the north campus. The building contains laboratories, lecture rooms and work rooms for sociology, social welfare, and Extension and Continuing Education.

The W. W. Lawson Agricultural Building, erected in 1956, is located on the north side of the campus adjacent to the University agricultural laboratories. This building contains classrooms and laboratories equipped for teaching and research in scientific agriculture.

The Agricultural Laboratories and Experimental Units include the modern dairy barn, stock pavilions, farm shops, animal shelters, a modern walking horse barn, agronomy experimental plots, and a greenhouse.

The Frank "Fay" Young Poultry Plant, erected in 1951 at the cost of \$104,000, is located on the southwest side of the main campus. It consists of eighteen major and minor buildings, with ranges for various kinds of poultry, including water fowl. The Plant has the most modern equipment for teaching and experimental work in incubation, brooding, laying, nutrition, genetics, disease diagnosis and control, and poultry grading and marketing.

The Henry Arthur Kean Hall, erected in 1951 at the cost of \$1,500,000, is located on the south side of the campus at Centennial Boulevard and 33rd Avenue. This modern structure contains a gymnasium with a seating capacity of 4,500; health, physical education, and recreation classrooms and laboratories; staff offices; and facilities for indoor intramural sports, staff and student recreation, and physical therapy.

The William J. Hale Field House and Stadium are located on the northeast campus at Centennial Boulevard and 33rd Avenue. The Field House is a modern stone structure which contains accommodations for visiting athletes and offices and classrooms for the Air Force ROTC unit. The Stadium is equipped for night games and has a seating capacity of 16,000. The turf provides for athletic events of football and major and minor track sports.

The Student Health Service Building, located west of the women students' dormitories, has facilities for complete examination and limited treatment for students. It contains two wards for the accommodation of six women and six men students respectively.

Hale Hall, located west of the University library, is a modern three-story, fireproof residence hall for women students.

Edna Rose Hankal Hall, erected in 1957, is located on the north side of the campus. It is a modern three-story residence hall for women students. The building is equipped with modern conveniences for comfortable and wholesome living.

Clement Hall, erected in 1957, is located on the southeast side of the campus. This residence hall is a three-story building providing conveniences for modern living.

Good Will Manor is a colonial-type residence located north of Harned Hall. It houses the Office of Development.

The Alumni Building, located on the southeast campus, presently contains accommodations for faculty families and guest rooms for alumni and official visitors to the University.

Veteran Teachers Apartments are located on the south side of the campus for temporary accommodations of a limited number of faculty families.

Faculty Women's Residence Hall, located on the north campus, is a modern three-story building for the accommodation of single faculty women.

The Education Building, erected in 1958, is located on 35th Avenue, North, near Centennial Boulevard. It is a modern three-story air-conditioned building equipped with classroom and special laboratories for Teacher Education, Psychology, Counseling Center, and English.

The Faculty Cottages include four modern homes on the north side of the campus and nine homes adjacent to the central campus on 28th Avenue, North.

The Student Union, erected in 1959, is a modern three-story, air-conditioned brick and glass structure. The Union contains administrative offices of Student Personnel Services, offices of the Student Council and of other student organizations. Included in the facilities of the Union are lounges, meeting rooms, a game room, a grill and fountain, the University bookstore and Post Office.

An addition to the Union was completed in August 1968. This addition is a modern fireproof, air-conditioned structure and includes a cafeteria-ballroom with a seating capacity of 1000, a coffee shop, a billiards room, a multi-purpose room, a game room and a faculty dining room.

The Music Hall, established in 1960, is located on the north campus. This building houses facilities for Art.

The Chemistry Building, completed in Spring of 1961, is a modern two and one-half story air-conditioned building. The building contains undergraduate and research laboratories, classrooms, a lecture hall, offices, balance rooms, a departmental library, and a machine shop.

The Lena B. Watson Residence Center for Men, I, erected in 1964, is located on the southeastern part of the campus. It is a modern six-story building, air conditioned and fireproof. The building houses freshmen.

The Women's Residence Center, erected in 1964, is located on the north side of the campus. It is a modern six-story building, air-conditioned and fireproof. The building houses freshmen and contains a well-appointed cafeteria.

The Physics and Mathematics Building, completed in the Fall of 1965, is a modern, three-story, air-conditioned building. The building contains undergraduate and research laboratories, classrooms, a lecture hall, and offices.

The Lena B. Watson Residence Center for Men, II, erected in 1966, is located on the southeastern part of the campus. It is a modern seven-story building, air-conditioned and fireproof. The building houses upperclassmen.

The Graduate Residence Center for Women, erected in 1967, is located on the southwest part of the campus. It is a modern six-story building, air-conditioned and fireproof. The building houses upperclasswomen.

The Graduate School Building, erected in 1967, is a modern four-story, air-conditioned building. It is located directly west of the Administration Building. The building contains classrooms, laboratories and offices for: The Graduate School and the following Departments of the School of Arts and Sciences: English, Modern Foreign Languages, History and Political Science, and Speech and Drama.

The Operations Building, erected in 1967, is located on the north campus. This building replaces the old warehouse and houses the Maintenance Department. The Department of Printing is also located in the Operations Building.

The Music Building (un-named at present), erected in 1968, is a modern, sound-treated air-conditioned brick and glass structure designed to house the Department of Music with a modest amount of space allocated to the area of Art. The building contains administrative areas, a modern music appreciation center, spacious band



room with adjoining areas for instrumental instruction, repair and storage, practice rooms (31), choir room, and recital hall seating 226, several large classrooms, and closed circuit television facilities.

The Men's Residence Hall, erected in 1968, is located on the southeastern part of the campus. It is a modern seven-story building, air-conditioned and fireproof. This building is part of the Men's Residence Center Complex.

The Home Economics and Nursing Education Building, erected in 1970, is a modern three-story building located on the north side of the campus adjacent to the W. W. Lawson Agricultural Building. This building contains classrooms and laboratories for teaching and research in Home Economics and Nursing.

## **STUDENT PERSONNEL SERVICES**

The Student Personnel Services program aims to assist the student in developing the skills, attitudes, understandings, and insights which will assure full expression of his powers as a whole, dynamic person. Emphasis is on university relationships and experiences complementing formal instruction.

Reaching the interests, needs, and purposes of all students for superior educational, social, vocational, and cultural growth involves the coordinate planning of numerous university officials, faculty and staff members; among them are the Dean of Student Affairs, the Dean of Men, the Dean of Women, the Dean of Admissions, the Director of Student Health Service, the Deans of Schools and Heads of Departments, the Director of Career Counseling and Placement, Director of Veterans Affairs, Director of Housing, Directors of Residence Halls, Director of Food Service, Director of Off-Campus Housing, supporting counselors such as major advisers to foreign students; directors of university agencies and organizations affecting the welfare of students; committees such as the Guidance Committee, the Freshman Week Committee, the Social Committee, the Faculty Advisory Committee; and consultant specialists in medicine, psychiatry, psychology, social work, community relations, and vocational choice and placement.

## **COUNSELING AND GUIDANCE**

Upon being admitted to the University each student is assigned a major adviser.

The responsibility for the selection of courses rests, in the final analysis, upon the student. Similarly, it is the primary duty of the student to pursue courses in their proper order to meet the requirements for graduation. When the student registers for each quarter, he is required to consult his adviser concerning his choice of studies and must obtain written approval of the adviser on all schedules to be pursued. The student is urged, further, to confer with his adviser frequently.

Major advisers counsel students not only in curricular or educational matters but give attention to varied personal and inter-personal problems of students—health, financial adjustment, social adjustment, vocational choice and proposed after-college adjustment to life.

Major advisers who counsel freshman students assist the students with innumerable matters such as adaptation to new ideas, how to study, health and emotional adjustment, budgeting time and money, extra class activities, and residence hall and home relationships.

In solving specific problems, the Dean of Student Affairs assists students individually and in groups directly and by referral to responsible offices and/or appropriate on-campus or off-campus sources of assistance.

## **UNIVERSITY COUNSELORS**

University Counselors are sophomores, juniors, and seniors who, because of their leadership ability, have been chosen to assist with the orientation of freshmen and other phases of the University guidance program. The University Counselors include two groups: the Senior Counselors, who have had more than one year's experience as student counselors, and the Junior Counselors, who have had less than a year's experience as student counselors.

## **FRESHMAN WEEK**

All freshmen are expected to be at the University the week preceding the beginning of instruction in September and to remain throughout the week. The week is devoted to lectures and discussions on subjects of importance to new students, conferences

with advisers and counselors, health examinations, interest inventories, tests of mental ability, aptitude and achievement, and registration and enrollment in classes.

During Freshman Orientation Week, freshman students are given the following tests: mental ability, reading, English, mathematics, and an interest inventory. The tests are scored and processed in the University Testing Bureau, and the results for each student are reported on an individual profile chart showing the student's percentile rank on each test. The student's adviser uses the profile chart as a basis for educational guidance.

### **Freshman Assembly**

The Freshman Assembly is designed to provide entering freshmen at Tennessee State University with a series of group experiences that will assist them in identifying with higher education and subscribing to its requirements at the University. More, specifically, the Freshman Assembly will provide insight into the nature of higher education and how to develop the desirable habits, knowledges, skills, appreciations and other characteristics of an educated person. Each freshman must attend the Assembly once each week during his first year at the University.

Lectures, panel discussions, forums, films, field trips and resource persons will be employed to diversify the program. The Assembly will be centered around such topics as: Students Values, Student Responsibility, the Educated Man, Developing Appreciations and Developing a Philosophy for Living.

### **THE COMMUNICATIONS CLINIC**

The Communications Clinic is a University center at which work in reading, writing, speaking and listening is integrated for the purpose of helping students to improve in their communication through language. The Clinic was established to supplement class work by providing for more specialized attention to individual problems of communication skills.

The Clinic is open to all students of the University. In addition to clinical experience for students who may be deficient in communication skill, much of the work of the Clinic is devoted to students who need additional training in language skills to assure maximum benefit from university experiences. A part of the writing program is designed for seniors and graduate students who require special counsel concerning research reports.

Students may remain in the Clinic as long as they show a need for improvement and respond favorably to corrective procedures.

### **LIVING ACCOMMODATIONS**

#### **On-Campus**

The University residence halls provide opportunities for personal, social, and intellectual companionships and experiences in group living.

Housing facilities for women are provided in the Women's Residence Center, The Graduate Residence Center, and Edna R. Hankal Hall; and for men in the Lena B. Watson Men's Residence Center (two buildings), and the New Men's Residence Hall.

Rooms are furnished with twin beds, dressers, study tables, and straight chairs. Each student who has been approved for living in one of the residence halls should bring a pillow, pillow cases, sheets, bedspreads, blankets, two pairs of curtains, towels, dresser and table covers, and any other accessories which will make his room more comfortable and attractive.

#### **Off-Campus**

All students outside of the Nashville area are expected to live on campus. Exceptions must be approved by a housing committee.

Students who live in homes in the city are expected to maintain the same general standards required of students who live on the campus.

### **CAFETERIAS**

The University Cafeterias serve three meals daily, Monday through Saturday, and two meals on Sunday. The meals are well-balanced and excellently prepared and are served cafeteria style. Students who live on the campus must purchase "meal books" for each quarter in residence.

Schedule of meal hours will be posted on residence hall bulletin boards.





## HEALTH SERVICES

The University maintains a health service for students. All entering students, whether freshmen or transfers, are required to bring the University Health Examination Form filled out by a family physician. In addition, spot checks of entering students are made by the University physician. Any illness in the residence halls or classroom should be referred to the Health Center. The following health services are provided by the University Health Center for all full-time students:

1. Care and treatment of minor illnesses and injuries.
2. Medicines and dressings.
3. Consultation with a University physician when needed.

## THE COUNSELING CENTER

The University has established a Counseling Center as another service for students. The Center is designed to help each student obtain the maximum benefit from his educational experiences.

The staff of the Counseling Center is prepared to help students in solving problems of educational, vocational, and personal planning and adjustment.



## RECREATION

Recreation facilities include a Student Union, indoor and outdoor swimming pools, and athletic field equipped for night activities, a gymnasium, a bridle path, Tennessee walking horses and American saddle horses.

In addition to the above, Kean Hall, which houses the University gymnasium, provides the following facilities: archery range, six badminton courts, basketball courts, boxing and wrestling room, bowling alleys, dancing studio, deck tennis, gymnasium, indoor play fields, inside handball court, recreation rooms, three shuffleboard, five volleyball courts, and a tennis court.

## STUDENT ORGANIZATIONS AND ACTIVITIES

A well balanced program of activities is available to students at the University. Cultural, social and recreational activities are sponsored, particularly by the Lyceum, Social and Athletic Committees, the Student Council, the Student Union Board of Governors, Department of Speech and Drama, and Department of Art and Music Education. Outstanding concert artists, speakers, orchestras, and dramatic productions are brought to the campus. The residence halls for women—in collaboration with Associated Women Students—and the residence halls for men also provide cultural, social, and recreational activities.

Intelligent and active participation in a reasonable number of extra-class activities provides opportunity for leadership, cooperation, and fellowship as well as the development of desirable skills, attitudes, appreciation and modes of behavior.

### Student Government

The Student Council, the key student organization, shares with the administration in planning and regulating student affairs. It appoints student representatives to University committees, stimulates student participation in campus life and recommends student organizations to the administration for official recognition.

### Student Publications

The METER, a publication of the student body, endeavors to keep students informed of the activities of the University and provides opportunity for the expression of student ideas and opinions.

THE TENNESSEAN is the University yearbook.



## LIST OF CURRENT CERTIFIED STUDENT ORGANIZATIONS

### Departmental Organizations

- Departmental organizations at the University include:
- Accounting Club. For students majoring in accounting.
  - AFROTC Angel Flight.
  - AFROTC Drill Team. ("Tiger Jets"). For outstanding cadets who possess desirable leadership potential.
  - AFROTC Society. A social organization open to all enrolled cadets.
  - Agricultural Education and Agricultural Economic Club. For majors in Agricultural Education and Agricultural Economic.
  - American Chemical Society, Student Affiliate Chapter. For majors in Chemistry.
  - American Institute of Architects. For majors in architecture.
  - American Society of Agronomy. For majors in Agriculture.
  - American Society of Civil Engineers. For majors in Civil Engineering.
  - Arnold Air Society. A national AFROTC organization for outstanding cadets enrolled in the AFROTC Course.
  - Art Guild. For Art majors and other interested students.
  - Association of Childhood Education International. For Elementary Education majors.
  - Biology Club. For Biology majors.
  - Heperemots. For Health, Physical Education and Recreation majors.
  - Institute of Electrical and Electronics Engineers. For junior and senior Electrical Engineering majors. Also open to junior and senior Mathematics or Physics majors.
  - Mathematics and Physics Club. For majors and minors in Mathematics and Physics.
  - Music Educators' National Conference, Chapter 381. National organization for majors in Music.
  - National Technical Society. For Engineering majors.
  - Phi Beta Lambda Fraternity. For Business Administration majors.
  - Political Science Club. For Political Science majors.
  - Psychology Club. For Psychology majors.
  - Soil Conservation Society of America. For Soil Conservation majors.
  - Social Welfare. For Social Welfare majors.
  - Student National Education Association. For Education majors.
  - Student Nurses Association. For students in nursing program.
  - Tennessee State Aero Tigers. For Aviation Education majors.
  - Tennessee State University Chapter of American Home Economics Association. For Home Economics majors.
  - Tennessee State University Chapter of Alpha Eta Rho International Aviation Fraternity. For students in Aviation.
  - Tennessee State University Chapter of National Collegiate Association for Secretaries. For Business Education and Business Administration majors.
  - Thucydidean Society. For History majors.
  - Town Hall, for all students. An organization dedicated to the Discussion of current public issues.

### THE HONORS PROGRAM

Beginning with the 1964-1965 academic year the University offered a program for its freshmen with exceptional abilities. The purposes of the program are:

1. To stimulate students of exceptional ability and enable them to perform in keeping with their potential.
2. To give proper guidance to students with exceptional ability.
3. To develop an academic climate that will stimulate all students at the University to perform to their intellectual capacity.

Freshmen scoring well in English on the American College Test (ACT) are invited to participate in the Honors Program. Honors courses for freshmen are: Art, Biology, English, History, Music, Social Studies, and Colloquium.

Sophomore-level honors courses are: Foundations of Education, History, Human Development, Psychology of Learning, Social Studies, World Literature, and Colloquium.

Junior-level honors courses are Curriculum Development and Colloquium.

Senior-level courses are Colloquium and Senior Thesis.

## **NATIONAL HONOR SOCIETY**

The National Honor Societies of the University include:

Alpha Kappa Mu Honor Society, Phi Beta Tau Chapter. An organization open to students of Junior Class standing or above with a cumulative average of 3.3 or above.

Alpha Mu Gamma of Aeta Sigma Chapter. For outstanding students in French, German or Spanish. Freshman students may qualify for membership.

Beta Kappa Chi Scientific Society, Xi Chapter. An organization for outstanding students and scholars in natural sciences and mathematics.

Kappa Delta Pi Honor Society, Zeta Chi Chapter. An organization for outstanding students and scholars in education.

Kappa Omicron Phi, Beta Sigma Chapter. Grade point 3.00 average Home Economics, 2.5 in all Home Economics courses, 8 or 12 hours.

Pi Kappa Delta Honor Society. National Forensic fraternity for debaters and public speakers who have achieved proficiency and National recognition in the field of Oratory.

Pi Omega Pi Fraternity, Beta Psi Chapter. An organization for outstanding students interested in teaching business subjects.

Sigma Delta Pi, Gamma Eta Chapter. An organization of outstanding students in Spanish.

Sigma Rho Sigma, Gamma Chapter. An organization for future social science teachers.

Theta Alpha Phi, Epsilon Chapter. An organization for outstanding students in drama.

Pi Delta Phi, Beta Omicron Chapter. An organization for outstanding students in French.

## **STUDENT EMPLOYMENT**

The University attempts to provide part-time employment for a limited number of students who establish needs for financial assistance, and who, by their scholarship records, appear capable of making satisfactory grades as work-aid students.

Inasmuch as the first year is one of general adjustment to university life and studies, entering freshman students are advised not to seek employment on the campus or in the city.

Students who desire part-time work may apply at the Office of Student Financial Aid.

Students who are interested in obtaining part-time employment in the city may make inquiries at the Career Counseling and Placement Bureau.

The University may deny a student the privilege of working if such employment jeopardizes the welfare of the student or the University in any manner.

## **CAREER COUNSELING AND PLACEMENT BUREAU**

The Career Counseling and Placement Bureau assists students in determining their career goals and in securing positions for which they are qualified, and offers follow-up and career counseling services to alumni.

The services are available and free to all students and alumni of the University.

The Bureau maintains credentials which include personal data, academic and extra-curricular achievements, work experience and faculty evaluations. These credentials are sent to prospective employers at the request of the graduate, a faculty member, or the employer. Credentials are sent only with permission of the graduate.

Graduating seniors and graduate students are required to register with the Placement Bureau which is located in the Student Union—Room 220.

## **THE STUDENT HANDBOOK**

The Student Handbook is a means of facilitating communication among the members of the University. It serves as a source of necessary and useful information which will help the student understand his privileges, rights, and responsibilities pertaining to student affairs. The Handbook contributes to the high level of cooperative and constructive relationships between students and various departments of the University.



## **CONDUCT**

It is expected that students live up to the highest ideals of womanhood and manhood. It is also expected that every student will be diligent in study, prompt and regular in meeting class assignments and all other responsibilities with the University.

A detailed statement of University regulations concerning conduct and procedures for handling student violations are contained in the Student Handbook.

## **TRAFFIC AND PARKING REGULATIONS**

Any student operating a motor vehicle on the campus is required to register this vehicle each school year with the Campus Security Office. The University motor vehicle registration sticker which is issued must be displayed on the left side of the rear bumper.

## **OFFICE FOR DEVELOPMENT AND PLANNING**

The development program consists of (1) alumni affairs, (2) public relations, (3) fund raising, (4) long-range planning, and (5) special projects. The purpose of the office is to assist the administration in interpreting the role and mission of the institution to the public and to assist the faculty in securing funds needed for special programs.

### **Alumni Affairs**

The Office of Alumni Affairs is an organization designed to keep graduates and former students informed of the University's many programs, and operates to determine the impact that alumni are making upon the national and international communities. Toward the realization of these goals the Alumni Office coordinates much of its activities with other offices of the University whose functions bear on alumni contacts. Among these are the Placement Bureau and the Bureau of Public Relations. The Alumni Office maintains contact with more than ten thousand alumni through the program of the National Alumni Association and the established channels of the University.

### **Bureau of Public Relations**

The general purpose of the program of Public Relations at Tennessee State University is to provide an organizational entity which will serve as the chief extension of the University into public contacts that are significant to the fulfillment of its mission in higher education.

Making use of all forms of communication media, including local and national press, radio, television, educational and scientific journals, the Bureau seeks to effect creative expression and accurate interpretation of the University, its policies and activities to its many publics.

## **EXTENSION AND CONTINUING EDUCATION**

The Division of Extension and Continuing Education is responsible, in conjunction with the five schools, for the establishment and maintenance of all continuing education activities of the University including non-credit programs, short courses, conferences, and institutes. The Division of Continuing Education has accepted the following goals as primary to its assigned role in meeting the vast and varied educational needs of today's citizens:

1. To provide night and day courses, on and off campus, for adults who are unable to undertake regular, full-time study at the University.
2. To provide opportunities for adults to continue their development as individuals and as citizens. These programs allow adults to enhance their intellectual growth, aesthetic enjoyment, and creative activity, and to increase their understanding of changing personal relationships and use of recreational and discretionary time, thus making themselves wiser consumers, more effective workers, better family members, and more responsible community members.
3. To provide opportunities for individuals to continue vocational or professional education beyond and apart from academic degrees; and to contribute to the economic development of Tennessee by providing continuing educational services to business, labor, government, and the professions, through various non-credit seminars, colloquia, short courses, conferences, and institutes.



**EXPENSES,  
FINANCIAL AID, AND  
ADMISSIONS**

## GENERAL INFORMATION AND FEES

### Fees Are Subject to Change Without Notice

All fees listed on this sheet are quoted on a quarterly (12 weeks) basis. Approximately \$50.00 per quarter should be allowed for books and supplies. Books and supplies can be purchased at the University Bookstore located in the University Union Building.

### Application Fee

An application fee of \$5.00 is charged for processing all applications for admission or readmission to the University. A money order or certified check for \$5.00 (payable to Tennessee State University) must accompany the application.

### Campus Undergraduate Students for Quarter

	TENNESSEE STUDENTS			OUT-OF-STATE STUDENTS		
	Watson I Watson II Watson III WRC	GRC	Clement Hale Hankal	Watson I Watson II Watson III WRC	GRC	Clement Hale Hankal
Maintenance Fees	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00
Tuition	NA	NA	NA	200.00	200.00	200.00
Debt Service Fee	10.00	10.00	10.00	10.00	10.00	10.00
Room	100.00	109.00	90.00	100.00	109.00	90.00
Board	150.00	150.00	150.00	150.00	150.00	150.00
	<u>\$356.00</u>	<u>\$365.00</u>	<u>\$346.00</u>	<u>\$556.00</u>	<u>\$565.00</u>	<u>\$546.00</u>

### Campus Undergraduate Students Making Minimum Payments\*

Maintenance Fees	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00	\$ 96.00
Tuition	NA	NA	NA	200.00	200.00	200.00
Debt Service Fee	10.00	10.00	10.00	10.00	10.00	10.00
Room	100.00	109.00	90.00	100.00	109.00	90.00
Board	75.00	75.00	75.00	75.00	75.00	75.00
	<u>\$281.00</u>	<u>\$290.00</u>	<u>\$271.00</u>	<u>\$481.00</u>	<u>\$490.00</u>	<u>\$471.00</u>

### Off-Campus Students\*\*

	TENNESSEE STUDENTS		OUT-OF-STATE STUDENTS	
	Undergraduate	Graduate ***	Undergraduate	Graduate ***
Maintenance Fee	\$ 96.00	\$106.00	\$ 96.00	\$106.00
Tuition	NA	NA	200.00	200.00
Debt Service Fee	10.00	10.00	10.00	10.00
	<u>\$106.00</u>	<u>\$116.00</u>	<u>\$306.00</u>	<u>\$316.00</u>

### Part-Time

	TENNESSEE STUDENTS		OUT-OF-STATE	
	Undergraduate Under 12 hrs.	Graduate Under 9 hrs.	Undergraduate Under 12 hrs.	Graduate Under 9 hrs.
Tuition	\$8.00 Qtr. Hr.	\$12.00 Qtr. Hr.	\$25.00 Qtr. Hr.	\$34.00 Qtr. Hr.
Student Service	1.00 per Qtr.	1.00 per Qtr.	1.00 per Qtr.	1.00 per Qtr.

### Special Fees

Music Instrument Lesson (Qtr. Hr.)	\$ 7.00	Voice per Lesson (quarter hour)	\$ 7.00
Organ per Lesson (Qtr. Hr.)	14.00	Class Audit (quarter hour)	5.00
Conference—600 (per quarter)	15.00	Master's Thesis Binding	18.50
Application (including readmission)	5.00	Diploma Fee	25.00
ACT Test	8.00	Automobile Registration (per academic year)	15.00
Graduate Record	10.00	(per summer)	5.00
Duplicate I.D. Card	10.00	GED Test	6.00
Transcript	1.00	Graduate Oral	15.00
Late Examination or Removal of Incomplete	2.00	Lost Registration Material	5.00
		Late Registration, (first day after announced registration)	5.00
		(everyday after—per day)	5.00
		Bad Check	2.00

### No Credit

Full PAYMENT OF FEES IS DUE ON REGISTRATION. The Business Manager is not authorized to grant deferment for the payment of fees. A student is officially admitted to class only when the teacher is presented a schedule card which has been validated by the Office of Admissions and the Business Manager. All Money Orders, Cashier's Checks, or Certified Checks should be made payable to Tennessee State University and sent to the BUSINESS OFFICE, Tennessee State University, Nashville, Tennessee 37203.

\* \$75.00 due before meal card issuing dates for November for first quarter; \$75.00 due before meal card issuing dates for February for second quarter and \$75.00 due before meal card issuing date for May for third quarter.

\*\* Off-campus students may purchase meal tickets at the Business Office for \$75.00 per meal period.  
\*\*\* Room and board charges are the same as undergraduate rates for graduate students who wish to live on campus.





## ROOM AND BOARD

Students assigned rooms in the University residence halls will be required to pay the quarterly room rent and take meals in one of the University cafeterias. Charges for room and board are made on a quarterly basis and are payable at the beginning of the quarter. A student may pay board charges in three installments, the first day of official registration and the first day of the second and third months of the quarter. A charge will be made for the replacement of a meal card in the event that it is lost, misplaced or stolen during the quarter. This charge will be made on the pro-rata basis for the remaining days of the quarter.

Residence halls and the cafeteria will be closed during the Christmas recess and spring vacation period. THE LAST MEAL BEFORE CHRISTMAS HOLIDAYS AND THE SPRING VACATION PERIOD WILL BE SERVED IN THE CAFETERIA AT NOON ON THE LAST DAY OF CLASSES BEFORE THE PERIODS BEGIN. Students should plan to clear the residence halls 12 hours after their final examinations.

## ROOM RESERVATIONS

A \$10.00 room reservation fee is required. Room reservation fees are not refundable. This fee is forfeited if the room is not taken; it is applied on expenses if the room is taken. The room reservation fee should be paid only after the applicant has been officially notified of his acceptance by the Office of Admissions and Records.

## SENDING OF MONEY

Students are advised against the sending of cash money through the mails. In case the money is lost through the mails the University assumes no responsibility for the loss. Letters containing payments to the University should be addressed to the Business Manager, Tennessee State University, Nashville, Tennessee.

## FINANCIAL REGULATIONS

A student will not be permitted to register for the new quarter or remain in dormitory residence in any quarter if his financial obligations are not satisfactorily met.

No student will be given a diploma until all financial obligations are paid in full.

Transcripts are sent out only after all financial obligations to the University have been satisfied.

## REFUND OF FEES

If a student withdraws within two weeks after the beginning of classes for the quarter, a refund will be made of 80% of the fees. Each week thereafter, the amount will be reduced 20%. For refund purposes the date of withdrawal shall be the date of the filing of a request for withdrawal with the Registrar. The diploma fee is not refunded. No refund of rent, tuition or fees will be granted to students who are dismissed or suspended.

## FINANCIAL AID

Tennessee State University has a broad program of financial aid. The applicant with outstanding need is advised to view financial aid from a composite standpoint and to consider the possibility of employing more than one type of aid. Inasmuch as the University cannot supply the financial needs for all of its students, the student is urged to investigate outside aid also. In the interest of financial need assessment through a standardized and unbiased approach, Tennessee State University subscribes to the College Scholarship Service. Therefore, a Parent's Confidential Statement (PSC) is required in conjunction with applications for financial aid, both initial and renewal. The Federal government endorses this approach in conjunction with the various aid programs that it finances. The Parent's Confidential Statements may be obtained from secondary school counselors and from the Director of Student Financial Aid at the University. Major sources of aid are:

College Work-Study—A work program is a product of the Economic Opportunity Act of 1964.

College Work-Aid—Provides part-time employment on-campus from University funds.

Educational Opportunity Grants Program—A Federal funded program which is a product of the Higher Education Act of 1965.

National Defense Student Loan Program—Provides low-interest loans to qualified students.

Nursing Scholarship and Nursing Student Loan Programs—Assists students of exceptional financial need to pursue their course of study.

Academic Work Scholarships—Available to Tennessee high school graduates who were in the upper quartile of their graduating class.

## ELIGIBILITY

Need, academic record, enrollment, citizenship and good standing; and, in the case of EOG show academic or creative promise and not financially able to attend school without the grant.

The student who seeks aid is expected to estimate his expenses for the rest of the school year which would include tuition and fees, and board, books and materials, transportation, laundry and cleaning, recreation and personal expenses.

## HONORS, SCHOLARSHIPS AND AWARDS

An increasing number of scholarships are granted each year to students at Tennessee State University. The scholarships differ greatly in their specifications—some stress high academic achievement, while others place emphasis on such matters as financial need, potential in a certain field, urban or rural residence, etc. The scholarship program is administered through the SCHOLARSHIP COMMITTEE. A student desiring additional information about scholarships should address his inquiries to THE DEAN OF STUDENT AFFAIRS, giving his scholastic average, his field of study interest, and an estimate of his financial needs.

In the immediate past years the following kinds of scholarships have been awarded:

School of Engineering in amounts from \$250 to \$2000 based on scholarship and financial need—Western Electric; Standard Oil (Calif.); Humble Oil; Bethlehem Steel;

Gulf Oil; American Society for Engineering Education; Union Carbide; General Electric; Dupont; Celanese Corporation.

University wide: in amounts from \$250 to \$2000 based on scholarship and financial need—General Motors; Alcoa; Greyhound Lines; Kroger; Allied Chemical.

School of Agriculture and Home Economics based on residence, scholarship and financial need: Sears Roebuck (\$600); Rehabilitation Corp. (\$900).

Air Force Awards are presented annually to distinguished cadets.

Alumni Scholarship Awards and Gifts are made annually by various chapters over the United States and reunion classes.

Athletic Awards are presented annually to those active in intercollegiate sports and to those sponsoring athletic events.

Departmental Awards and Departmental Club Awards are presented annually by Business Education, Home Economics, Industrial Education, History Study Club, Literary Guild, Mathematics Club, Music Department, Student Affiliate Chapter of the American Chemical Society, and the Tennessee State Players' Guild.

Fraternity and Sorority Scholarship and Achievement Awards are made annually by Alpha Kappa Alpha Sorority, Alpha Phi Alpha Fraternity, Delta Sigma Theta Sorority, Omega Psi Phi Fraternity, Phi Beta Sigma Fraternity, Sigma Gamma Rho Sorority, and Zeta Phi Beta Sorority.

The W. J. Hale Scholarship Foundation, Incorporated, Award, presented to the outstanding graduate of the University who prepares for a teaching career at Tennessee State.

Dean's List. Students who earn a quality point average of 3.00 (B) or above in all subjects and who pursue a minimum of 12 quarter credit hours in the regular curriculum shall be placed on the Dean's List for that quarter.

Masonic Scholarships. The Most Worshipful Prince Hall Grand Lodge of Free and Accepted Masons of Tennessee and its jurisdiction gives five annual scholarships to the students of the University under the following categories: (1) the highest ranking freshman students, (2) students of unusual ability and promise, (3) sons and daughters of living Masons, (4) sons and daughters of deceased Masons and (5) students of the University who are Tennessee Prince Hall Masons.

The National Honor Societies present awards annually to members elected during the year: Alpha Kappa Mu, Beta Kappa Chi, Gamma Theta Upsilon, Kappa Delta Pi, Pi Delta Phi, Sigma Delta Pi, Sigma Rho Sigma, Pi Omega Pi, and Theta Alpha Phi.

Special Awards and Trophies presented annually include the G. S. Hamilton Award, the Hamilton High School Award and the United Business Education Association Smead Award.

Student Council members are presented awards annually.

University Counselors who are graduating seniors and who have served at least two years as University Counselors assisting with the Freshman Orientation Program and the general University Guidance Program receive awards.

Who's Who in American Universities and Colleges. Recognition in "Who's Who in American Universities and Colleges" is given students classified as juniors, seniors, and graduates who are outstanding in scholarship, leadership, educational and extra-curricular activities, general citizenship, and service to the University.

University Work Scholarships are awarded annually to graduates of Tennessee high schools having a scholastic rank in the upper ten percent of their class.

## **AIR FORCE ROTC COLLEGE SCHOLARSHIP PROGRAM**

Scholarships are available to qualified cadets in the four-year program. These cover full tuition, laboratory expenses, incidental fees, and an allowance for books. Scholarship cadets also receive \$50 each month in non-taxable pay. Initial selection for scholarships to sophomores, juniors and seniors is made on the campus by a board composed of institutional officials and Air Force ROTC officers. Final selection is made by a central selection board at the Air Force ROTC headquarters. Scholarships are made at the Air Force ROTC headquarters. Men and women students are eligible for these scholarships. Interested high school seniors are encouraged to submit their applications early in their senior year to Air Force ROTC (ARTO-O/TA), Maxwell AFB, Alabama 36112. Applications can be obtained from guidance counselors or from the Air Force ROTC headquarters.



## ADMISSION

### Procedures

All communications regarding admission, credit hours, transfers of credits and advance standing should be addressed to the Dean of Admissions of the University. Applications should be filed for the ensuing school year at or near the close of the current year. The application form and other directions will be sent from the Office of Admissions and Records upon request. These should be filled out and mailed promptly. Transcripts of records from all high schools and colleges previously attended, together with all other required information, must be on file in the Office of Admissions and Records before an application is processed. Applicants must receive official notice from the Office of Admissions and Records that they have been approved for admission before presenting themselves for registration.

The final dates for receipt of application, test scores, transcripts and medical certificate forms required for admission to the University are as follows:

Fall Quarter	September 6, 1971
Winter Quarter	December 6, 1971
Spring Quarter	March 6, 1972

### General Requirements:

1. The applicant must be at least 16 years of age.
2. The applicant must furnish satisfactory evidence of good moral character, and good health.
3. The applicant must file an official application form with the Office of Admissions and Records.
4. The official transcript of all high school credits must be filed in the Office of Admissions and Records before the applicant may be officially admitted to the freshman class; and all high school and college transcripts must be filed for admission to advanced standing.
5. All required data must be filed in the Office of Admissions and Records for consideration for admission.
6. All students, except those who seek admission with advanced standing, must take the American College Tests and a health examination prior to admission, and the special tests required by the department in which the major is pursued. The ACT tests are given in the months of November, February, April, June and August. It is recommended that prospective applicants write the test in November of their senior year. For information on location of test centers and dates for tests write: American College Testing Program, Iowa City, Iowa, or to the Director of Counseling and Testing at the University.

For regular admission, residents of Tennessee must attain a minimum composite score of 12 on the American College Tests or have a minimum grade point average of 2.25 on the high school record (4.00 scale). Residents who score below 12 will be accepted conditionally, and will be limited to a maximum of 12 credit hours per quarter for the first three quarters.

Non-residents of Tennessee must attain a minimum composite score of 16 on the American College Test or have a minimum grade point average of 2.50 on the high school record, based upon a 4.00 scale.

7. All new students must attend the orientation period at the University one week prior to official registration.
8. If a period of more than ninety days (one regular quarter) has elapsed between graduation from high school and the date of entering the University, the applicant will be required to submit a notarized statement as to whether or not he attended another college or university during this time.
9. A college student whose education has been interrupted for more than ninety days (one regular quarter) must present a notarized statement as to whether or not he has attended another college or university during this time.



## METHODS OF ADMISSION—UNDERGRADUATE

Applicants who meet the requirements listed above are eligible for admission by the following methods:

Applicants must present a transcript of credits showing graduation from an approved high school. (Sixteen (16) units from a 4 year high school and twelve (12) units from a 3 year high school).

### Accepted by High School Equivalency Examination

Veterans of the armed services who entered service before high school graduation, and civilians 21 years of age or older, who may have discontinued high school before graduation, may be admitted to college by taking the G. E. D. High School Equivalency Examination, and earning a score that qualifies the student for a high school diploma in the State of Tennessee. An average score of 45, with no score on a single test less than 35, is required.

This regulation does not apply to applicants from foreign countries.

## SCHOOL OF ENGINEERING

### Admission Criteria—

In order to place sufficient emphasis on English, mathematics, physics and chemistry for normal progress in engineering, high school preparation should include: English, 4 units; Algebra, 2 units; Plane and Solid Geometry, 1½ units; Trigonometry, ½ unit; Physics, 1 unit; Chemistry, 1 unit; Social Sciences, 2 units; and Electives, 4 units.

High school students who are deficient in one or more of the preparatory engineering subjects may be admitted conditionally, but their competency must be established by their scores on the American College Tests and the successful completion of the deficient courses by the time they have earned 50 quarter hours.

The minimum acceptable ACT score for regular admission to the School of Engineering is determined from a formula that, based on the high school average, predicts success in engineering. Based on this prediction formula a table has been prepared showing the range within which acceptable ACT score and high school average might fall:

Minimum Cumulative ACT Score of 17 and High School Average of 3.17.

Minimum High School Average of 1.92 (out of 4) and ACT Score of 27.

### ADMISSION WITH ADVANCED STANDING FROM ACCREDITED INSTITUTIONS

Students who have attended other accredited colleges or universities may apply for admission to Tennessee State University with advanced standing by fulfilling the following requirements:

1. An official record of transcripts from all high schools, colleges, or universities previously attended must be placed on file in the Office of Admissions and Records, whether or not the applicant wishes to receive credit for such work.
2. The courses presented for advanced credits must be substantially equivalent to those afforded at Tennessee State University.
3. A student who has failed in his work at another institution and is not entitled to continue there will not be admitted to Tennessee State University.
4. The applicant must have been granted honorable dismissal from the last institution attended.
5. Students who have attended other colleges or universities will be admitted to Tennessee State University provided that:
  - (1) Non-residents of Tennessee have a minimum cumulative average of "C" or 2.00 and are in good standing with the institution from which they transfer.
  - (2) Residents of Tennessee have a minimum cumulative average of "C" or 2.00 and are in good standing with the institution from which they transfer.

A student who has attended this University and transfers to another accredited college or university will be considered for re-admission on the basis of the scholastic average earned at both institutions.

6. Students who have attended other colleges or universities cannot be admitted as freshmen solely on the basis of their preparatory school records.

7. A student who fails to present credits from all colleges which he has attended prior to registration will forfeit the right to later claims of such credits after admission.
8. Students who present transfer credits from several colleges or universities will be considered for admission on the basis of the scholastic work done at all institutions attended.



#### **Admission with Advanced Standing from State Community Colleges**

Credit earned by students attending community colleges of Tennessee will be accepted toward degree programs on the same basis as work taken on the campus of Tennessee State University.

Students who have obtained an associate degree in a pre-baccalaureate program at a community college of Tennessee can transfer to the same type program at Tennessee State University with credit for having met the lower division requirements for that degree.

#### **Admission with Advanced Standing from Non-Accredited Colleges**

Students who desire to enter Tennessee State University from non-accredited colleges may register under the following stipulations:

They will be on probation for the first 48 hours credit.

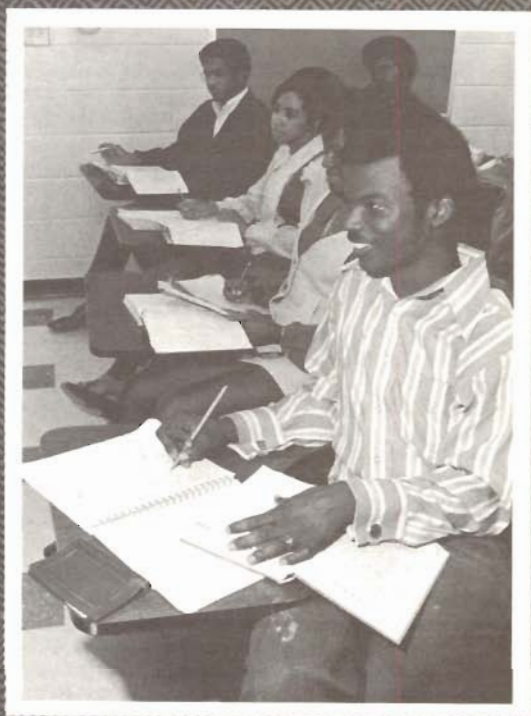
Credit for work done prior to entering Tennessee State University will be granted as:

1. Full credit if work at Tennessee State University is 3.00 or above.
2. Three-fourths credit if work at Tennessee State University is below 3.00 but not less than 2.50.
3. Half credit if work at Tennessee State University is below 2.50 but not less than 2.00.
4. No credit if work at Tennessee State University is below 2.00.

#### **READMISSION TO THE UNIVERSITY**

A student in good standing with the University whose attendance has been interrupted for one year or more must apply for readmission and submit a transcript of all credits earned by him during his absence from this University, or a notarized statement to the effect that he has attended no other college during his absence from Tennessee State University.





## **ACADEMIC INFORMATION**

## ACADEMIC INFORMATION

### Registration

Any person who anticipates registering as a Tennessee State University student should be sure that he has met the University requirements for admission. Official enrollment is achieved by properly registering in each course, having photograph made for identification card, and payment of all fees.

Normally, all students register for courses during the days on which registration is scheduled. Detailed instructions are made available by the Dean of Admissions and Records as to time, places, and procedure for registration.

A late registration period is provided for those who are unable to register during the regular registration days. However, students who register late are required to pay a late registration fee, and often find it difficult to secure a satisfactory schedule of classes. The late registration fee is assessed at the rate of \$5.00 per day, beginning the first day after the close of regular registration.

### Class Loads

**Normal and Minimum Class Loads.** The normal class load for a full time undergraduate student is 18 credit hours per quarter, and the minimum class load is 12 quarter hours. Freshmen entering for the first time normally enroll for 15 to 17 credit hours.

A student who wishes to pursue less than 12 quarter hours per quarter must obtain approval from his Major Adviser, his Department Head, and the Dean of Admissions and Records. Similar approval is needed to pursue a class load in excess of 18 quarter hours. The appropriate form for requesting overloads or underloads may be secured from the Office of Admissions and Records.

**Probationary Student Class Load.** A student who incurs scholarship probation in any quarter (see scholarship standards) will be allowed to carry a maximum of 15 or a minimum of 12 quarter hours.

**Change of Quarterly Program After Registration Period.** A student may drop a course within the first week of class sessions during a quarter without being awarded a grade for the course. During this same period a student may add courses to his program. However, all changes in the student's program must be approved by his Major Advisor and the instructors of the courses involved to make the changes official.

For courses dropped after the first week of classes in a quarter a grade will be recorded on the student's record. If the course is dropped during the second or third week of classes, the grade will be "WP" or "WF" depending on the quality of work at the time the course is dropped. If a course is dropped after the third week, the grade of "F" will automatically be assigned, except upon written certification by the adviser that further attendance in the class would be detrimental to the student's health or has been made impossible by circumstances beyond the student's control. In the event of such certification the student shall receive the grade of "WP" (signifying passing at the time of withdrawal) or the grade of "F" (signifying failure) as indicated by the instructor. If the adviser desires confirmation of the illness of the student, this confirmation may be obtained through the Office of the Dean of Student Affairs.

**Change of Major Field:** In order to change from one major to another, the student must obtain the official "Change of Major Form" from the Office of Admissions and Records and complete it with the signatures of the adviser of the program to be discontinued, and the Dean of Admissions. The student is then referred to his new major adviser through the Counseling Center. All records of the student must be transferred from the former to the new adviser.

The Change of Major Form must be filed in the Office of Admissions and Records within the first week of the quarter preceding the quarter the change is to be effective.

### CLASSIFICATION OF STUDENTS

All students of the University must be classified in one of the following categories:  
**Freshmen:** Those who have completed less than 48 quarter hours.

**Sophomores:** Those who have completed at least 48 quarter hours but less than 96 quarter hours.

**Juniors:** Those who have completed more than 96 quarter hours but less than 147

quarter hours who have earned an average of "C" (2.00) in all work taken.

**Seniors:** Those who have completed 147 quarter hours or more and have earned an average of "C" in all work taken.

**Specials:** (a) Those who meet entrance requirements and who wish to pursue particular studies but not to qualify for a bachelor's degree. Such students may be admitted with the permission of the Dean of Admissions and Records. (b) Those who are twenty-one years of age and who have not completed four years of high school work may enroll in such courses as they are prepared to take.

**Unclassified:** Those whose records are transferred from a non-accredited college.

### **Definition of a Quarter Hour**

A quarter hour: One hour of recitation once a week for ten to twelve weeks equals one quarter hour.

## **CLASS ADMISSION AND ATTENDANCE**

### **Admission**

A student should attend class beginning with the first class meeting; however, he is not officially enrolled until he presents the teacher a schedule card stamped by the Business Manager. This must be done during the first week of classes each quarter.

### **Class Auditors**

Regularly enrolled students may enter classes as auditors with the approval of the major adviser and the teacher of the course. The regular registration procedure is followed in registering for a class to be audited. The faculty member issuing the card shall indicate "Audit—No Credit."

Persons other than regularly enrolled students may be permitted to audit classes only with the consent of the Dean of Admissions and with the approval of the teacher of the course. Such persons shall follow the regular registration procedure and pay \$5.00 for each course to be audited.

Auditors are not under obligations of regular attendance, class preparation, recitation, or examination; nor do they receive credit. At the end of the quarter the "audit" course card will be marked "No Credit Audit" by the teacher and returned to the Office of Admissions and Records.

### **Class Attendance**

Regular and punctual attendance of all courses taken for credit is expected of each student. Course requirements, including tests and examinations, must be completed in order to secure maximum rating consonant with student performance. Any concessions, such as permission to make-up examinations, will be affected by irregular attendance.

## **ABSENCES**

Student absences are counted from the first scheduled meeting of the class.

The student who absents himself from class is under obligation to perform all requirements of each course in which he is registered, regardless of the cause or causes of absences.

**An official excuse:** An official excuse is identified as absence granted by the University for which the University is responsible. All official excuses for absences from classes must be approved by the Dean of the Faculty.

### **Tardiness and Leaving Classes**

The student is expected to begin class on time and remain during the full class period. Tardiness in attending class and leaving class before the end of the period constitute delinquencies, except when granted by the teacher.

A student who is late to class and/or leaves the class before the end of the specified class period without reasonable cause may be marked absent for the entire period at the discretion of the teacher.



## GRADING SYSTEM

Course grades for undergraduate and graduate students are awarded as follows:

"A" or "H" (Excellent)	4 quality points per quarter hour
"B" or "P" (Good)	3 quality points per quarter hour
"C" (Average)	2 quality points per quarter hour
"D" (Poor)	1 quality point per quarter hour
"F" (Failure)	0 quality point per quarter hour
"I" (Incomplete)	0 quality point per quarter hour
"WP" (Withdrew Passing)	0 quality point per quarter hour
"WF" (Withdrew Failing)	0 quality point per quarter hour
"S" (Satisfactory in non-credit courses)	0 quality point per quarter hour
"U" (Unsatisfactory in non-credit courses or non-attendance in credit courses)	0 quality point per credit hour

"I" is given to a student whose recitation is satisfactory but whose grades are withheld on account of failure to complete some required portion of the course, examination, laboratory, shop, or parallel exercises. The incomplete "I" grade will be changed to "N.C." (no credit) if not removed within one calendar year.

"W" is recorded for the student who officially withdraws from the entire University.

"F" is given to a student who fails to do a passing quality of work.

"S" is given to a student who gives satisfactory performance in a non-credit course.

"U" is given to a student who: (1) gives unsatisfactory performance in a non-credit course or (2) never attends a credit course for which he registered.

"Dropped"—a student is listed as having "dropped" a course only if he has followed the established procedure and has cleared through the Office of Admissions and Records.

### Deficiency Grades

Grades of Incomplete. "Incomplete" is a temporary grade which must be removed from the undergraduate student's permanent record within one calendar year from the date the grade was awarded. If all requirements of a course in which the "I" was awarded are not met within one calendar year, the grade of "I" will be changed to "N.C." (no credit). The student is responsible for initiating all necessary steps to remove the deficiency grade:

1. Inquire in the Office of Admissions and Records regarding the course in which the grade of "I" has been awarded.
2. Pay to the Business Manager's Office the fee of \$1.00 (applicable only to undergraduate courses).
3. Secure from the Office of Admissions and Records the replacement grade card.
4. Take the replacement grade card to the teacher of the course in which the "I" was earned.
5. The replacement grade card must be filed in the Office of Admissions and Records in person by the teacher of the course after it has been properly filled in (name of student, grade awarded, credit hours which the course carries, title of the course, major adviser's signature, and instructor's signature).
6. The "I" removal card must be in the Office of Admissions and Records no later than the last day of the quarter in which the "I" grade expires (a 12 month period).

Repeat Grades. With the approval of the student's Major Department Head, the student may repeat courses in which he has earned "D's" or "F's." The last grade awarded in a course repeated will be counted in calculating the over-all scholastic (grade point) average.

Grades of "F" received in a course after the second repeat of the course will be used in computing the average of a student who must repeat a course more than twice.

Repeating University Tests: Students who fail to make a satisfactory score on a required standardized tests may not repeat a test more than two times to secure a satisfactory score. Any score earned after taking a test beyond the third time will be invalid.

## **SCHOLARSHIP STANDARDS AND PROBATION**

### **Scholarship Standards**

1. All undergraduate students of the University are expected to maintain twice the number of quality points as the number of credit hours received.
2. A minimum cumulative average of "C" (2.00) is required for graduation in all bachelor degree programs.

### **Probation**

A student who is on probation cannot carry more than 15.0 quarter hours per quarter. Probation must be removed within the next two quarters in residence. A student who fails to remove the probation status during the next two quarters in residence will be suspended for an indefinite period. Suspensions are enforced once per year, at the end of the Spring Quarter.

The student who has not previously been suspended for low scholarship will be placed on probation for the next quarter in residence when his cumulative average is below the minimum for his classification. (Probation I) For the second successive quarter in which a student's cumulative average is below the minimum, the student's probation continues for another quarter. (Probation II) For the third successive quarter in which a student's cumulative average is below the minimum, the student will be suspended for one quarter. (Probation III) Suspensions are enforced once per year, at the end of the Spring Quarter.

A student who returns to the University from a suspension for low scholarship removes his probation by achieving the minimum cumulative average for his grade or class. Upon return to the university when suspended for low scholarship, the student must maintain a minimum quarterly average of 2.00 until he is removed from probation. He must also follow the instructions for probationary students as regards class load and course selection. He will be suspended indefinitely at the end of the Spring Quarter when he fails to do either of the above.

The Summer Session will not be counted as a period of academic suspension. A student who is suspended for low scholarship at the end of the Spring Quarter will not be permitted to re-enter the University until the Winter Quarter.

It is the student's responsibility to ascertain his academic status each quarter.

### **Required Minimum Cumulative Grade Point Average**

At the end of the first, second, or third quarters, a student whose average is less than 1.60 will be placed on probation.

At the end of the fourth, fifth, or sixth quarters, a student whose average is less than 1.80 will be placed on probation.

At the end of the seventh quarter and succeeding quarters, a student whose average is less than 2.00 will be placed on probation.

### **NORMAL PROGRESS**

A full time student who is not making normal progress toward completing degree requirements may be dismissed at the end of any quarter. Normal progress is defined as follows: A minimum of 12 earned hours per quarter or 36 earned hours per academic year with matriculation in courses by sequence and/or year as prescribed in the students' curriculum. Retention standards as outlined in the section on "Scholastic Standards and Probation" also apply.

### **COURSE EXAMINATIONS**

#### **Regular Examinations**

Examinations are required in all courses. Final examinations are held for a two-hour period at the end of each quarter, and at the end of each summer term.

#### **Absence from Final Examination**

Absence from the final examination will be indicated by a mark of (x). If the student's grades are of passing quality up to, but not including, the final examination, he shall receive a grade of "Incomplete" "I" for the course; if, however, the performance is of failing quality up to the final examination, a grade of "Failure" "F" will be awarded.

A senior who has received a grade of Incomplete in any subject must remove the incomplete grade three weeks prior to commencement.

### **Issuance of Grades**

After the close of each quarter, the grades of the student will be sent to the parents or guardians and to the major adviser.

### **Issuance of Transcripts**

At the beginning of the student's senior year a copy of the student's entire record will be sent to the major adviser.

The student may obtain a transcript of his record by paying the required fee of \$1.00.

To be official, a transcript must bear the seal of the University. Official transcripts are not given to students or alumni, but are mailed directly to the institution or persons considering the applicant for admission or employment.

### **WITHDRAWAL FROM THE UNIVERSITY**

To withdraw from the University, the student must make application on forms provided by the Office of the Dean of Student Affairs. The responsibility of filing for official withdrawal from the University rests with the student.

A student may withdraw from the University no later than ten calendar days prior to the beginning of final examinations in any quarter.

Students withdrawing from the University on their own application will be awarded a grade of "WP" or "WF" by the instructors of the courses for which they are enrolled, (WP signifying passing at the time of withdrawal and WF signifying failure at the time of withdrawal), based on actual attendance and classroom performance up to the time of withdrawal.

Students who withdraw from the University and remain out of school for three quarters or more must file an application for re-admission which application must be approved before the student may register again at the University.

### **UNIVERSITY REQUIREMENTS FOR A BACHELOR'S DEGREE**

A bachelor's degree is conferred on a student who satisfactorily completes a curriculum in one of the departments. The candidate for a bachelor's degree must satisfactorily complete each of the general requirements of the University as listed below:

1. The minimum University requirement for graduation is 198 quarter hours with a minimum average of "C" (2.00).
2. A minimum of 72 quarter hours must be completed in 300 and 400 level courses.
3. A minimum of 36 quarter hours must be offered for a major with a minimum of 15 quarter hours in courses on the 300 and 400 levels.
4. Six quarters of required activity courses in Physical Education.  
Note: These courses must be completed satisfactorily during the freshman and sophomore years. (This requirement is waived for veterans but no credit is awarded.) Students may take Aerospace Studies courses (100-200 level) in lieu of required physical education activity courses.
5. Nine quarter hours of English.
6. Three quarter hours of Mathematics.
7. Nine quarter hours of American History and Government. Students who do not present a year of American History on their high school transcripts are required by Tennessee Law to meet this requirement during the freshman year.
8. All departmental requirements.
9. Satisfactory performance on English Proficiency Examination.
10. A Senior Project.
11. All candidates for the bachelor's degree must spend the senior year or its equivalent (the last forty-eight quarter hours offered for the degree and the last nine months), in residence at the University.
12. **Transfer students must spend at least one academic year in residence at the University and earn while in residence not less than forty-eight quarter hours of credit with a minimum average of "C" (2.00).**



## The English Proficiency Test

All students must take the English Proficiency Test during the last quarter of the freshman year.

Those students who do not demonstrate satisfactory performance on the test will be required to enroll in the Reading Laboratory or to audit additional English courses for strengthening the areas of their deficiencies before again being permitted to take the test. Under no condition will students be permitted to apply for graduation until satisfactory performance on the test has been demonstrated.

## The Senior Project

All candidates for a bachelor's degree must complete a senior project. The project may be a literary or laboratory investigation, a collection or a compilation. The outcome of the project must be written in the form of a junior thesis of not less than one thousand, nor more than three thousand words. It must be typewritten and organized according to the approved style used by the University.

## Removal of Incomplete Grades

A graduating senior must remove all incomplete grades at least three weeks prior to commencement.

## Degrees With Honors

The degree of Bachelor of Science or Bachelor of Arts with honors is awarded with distinction or with high distinction. To be graduated with distinction, the student must earn an average of at least 3.25. To be graduated with high distinction, the student's average must be not less than 3.50.

Students who have participated in the Honors Program will, upon achieving an average of at least 3.25 and meeting other requirements of the Program, be graduated with UNIVERSITY HONORS.

## Application for Bachelor's Degree and Senior Status Forms

1. A candidate for a degree must file with the School Dean "Senior Standing Forms" after the completion of 147 quarter hours. This must be approved by the candidate's major adviser, and department head.
2. The candidate must file "application for Bachelor's Degree" three months prior to the date of graduation.
3. Forms for an "Application for Diploma" may be obtained by request at the Departmental Office and must be filed in the Office of the Business Manager after the signatures of the major adviser and Dean of the School are obtained.
4. The diploma fee (covering graduation materials and activities) must be paid and all accounts cleared at least two months prior to the date of graduation.
5. A clearance from the Placement Bureau and the Library must be filed with the Office of Admissions and Records one month prior to the date of graduation.

## REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN TEACHER EDUCATION PROGRAM\*\*

General Education Core (Both Elem. and Secondary) .....	63 qr. hrs.*
Professional Education Core (Both Elementary and Secondary) .....	24 qr. hrs.
Subject Matter Concentration .....	49-99 qr. hrs.*
Other Hours .....	To total the quarter hours required by the University and departmental requirements.

## REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN THE SCHOOLS OF EDUCATION AND ARTS AND SCIENCES:

Liberal Arts Core .....	57 qr. hrs.
Major Field Core .....	36 qr. hrs.
Major Field Related Core .....	Qr. Hrs. as required by the department
Elective Core .....	Qr. Hrs. as required by the department

\* Minimum quarter hours requirements.

\*\* Home Economics Education, Agricultural Education, Business Education, and Music are exceptions. See requirements as listed in departmental programs.

## REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE IN THE SCHOOL OF ENGINEERING

Two Year Common Curriculum .....	121 qr. hrs.
Engineering Major Curriculum .....	Qr. Hrs. as required by the department

## REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

To qualify for the Bachelor of Arts degree, the student must (1) fulfill the general requirements for a bachelor's degree and (2) complete the following liberal arts courses:

English 101, 102, 103 .....	9 qr. hrs.
World Literature 211, 212, 213 .....	9 qr. hrs.
Foreign Language (3-9 quarters) .....	12-30 qr. hrs.
Social Science .....	12 qr. hrs.
Natural Science .....	12 qr. hrs.
Mathematics .....	9 qr. hrs.
Philosophy, Music, Art, Drama .....	6 qr. hrs.

(combination of any two courses)

and (3) complete a major program of studies in one of the following subjects: Biology, Chemistry, History, Mathematics, Sociology, Social Administration, Speech and Drama, English, Modern Foreign Languages, Physics, Political Science, Psychology, or Applied Music.

### Modern Foreign Language Requirement for The Bachelor of Arts Degree

The foreign language (French, German, or Spanish) requirement may be satisfied as follows:

- Students who present no (0) units of a foreign language in high school when they enter the University are to take nine (9) quarters of work in a foreign language, beginning with the freshman course in that language.
- Students who present two (2) units of a foreign language in high school and who desire to continue work in that same language may satisfy the language requirement by pursuing six (6) quarters in that language, beginning with the sophomore course of that language.
- Students who present four (4) units of a foreign language in high school and who desire to continue work in that language may satisfy the language requirement by pursuing three (3) quarters in that language, beginning with the junior course.

### Proficiency Test in French, German, Spanish

Students who enter the University for the first time and who present two or more high school units in a foreign language may take a proficiency test in that language. A student's proficiency in a given language may alter the number of quarter hours required to satisfy the language requirement.

## PROVISIONS FOR GRADUATE AND PROFESSIONAL EDUCATION FOR TENNESSEE STUDENTS

### Veterinary Medicine

Under authority of Chapter 82, Public Acts of 1949, the State of Tennessee has entered into a contract, through the Board of Control of the Southern Regional Council on Education, with the Tuskegee Institute whereby Tuskegee agrees to enroll two qualified freshman students from the State of Tennessee each year who will pursue courses in Veterinary Medicine. A list of persons who are qualified and eligible for admission to Tuskegee will be submitted to Tuskegee Institute by the President of Tennessee State University. Therefore, persons who are interested in taking courses in Veterinary Medicine should write to President A. P. Torrence, Tennessee State University.







### **Medical and Dental Training**

Under authority of Chapter 82, Public Acts of 1949, the State of Tennessee has entered into an agreement with Meharry Medical College, through the Board of Control for the Southern Regional Council on Education, whereby Meharry Medical College agrees to provide a quota of twelve places in the School of Medicine at the Meharry Medical College and five places in the School of Dentistry at the Meharry Medical College for students from the State of Tennessee to be selected from applicants certified by the Commissioner of Education. Persons who are citizens of the State of Tennessee and who wish to pursue courses in medicine or dentistry should apply to the Meharry Medical College for entrance in the School of Medicine or the School of Dentistry.

### **INFORMATION FOR VETERANS, IN-SERVICE PERSONNEL, DEPENDENT CHILDREN AND WAR ORPHANS**

A veteran who has served continuously on active duty for a period of at least 181 days; any part of which was after January 31, 1955 and who was discharged or released under conditions other than dishonorable is eligible for training under the Veterans Readjustment Act of 1966. The sons and daughters of deceased veterans and the sons and daughters of living veterans who have disabilities which are considered to be total and permanent in nature are eligible for training under the War Orphans Educational Assistance Act. Applications for benefits under these Acts may be secured from the Veterans Administration Office nearest the applicant.

#### **Payment of Bills and Fees**

Regular fees, including tuition, board and room, composite and Student Service, and supplies are paid by veterans on the same basis as other students. Bills must be paid at time of registration.

Veterans and War Orphans are cautioned to have sufficient funds to pay all expenses for registration and enough money to pay expenses for at least two months. Checks are not issued in advance, but at the end of a full month's period.

#### **Class Load**

All students who expect to receive educational allowance checks must observe the following class load schedule on the undergraduate level:

Full time for 14 hours or more

$\frac{3}{4}$  time for 10-13 hours

$\frac{1}{2}$  time for 7-9 hours

None for less than  $\frac{1}{2}$  time (War Orphans only)

Veterans' training, conduct and progress must at all times, both on and off the campus, be maintained in a satisfactory manner, conforming to the ideals of the University. For further information write to:

Dean of Admissions and Records

Tennessee State University

Nashville, Tennessee 37203



**ACADEMIC  
SCHOOLS**



# ACADEMIC PROFILE—Organizational Structure

## COLLEGES & SCHOOLS (UNIVERSITIES ONLY)

## DEPARTMENTS OR DIVISIONS

## DEGREES OFFERED

### SCHOOL OF AGRICULTURE AND HOME ECONOMICS

Plant Science  
Animal Science  
Agricultural Education and Economics  
Home Economics  
Nursing Education

BS  
BS  
BS  
BS  
AA

### SCHOOL OF ARTS AND SCIENCES

Biological Sciences  
Chemistry  
Mathematics & Physics  
English  
Modern Foreign Languages  
Speech & Drama  
History, Political Science, and Geography  
Sociology

BA, BS  
BS  
BA, BS  
BS  
BA, BS  
BA, BS  
BS, BA  
BS, BA

### SCHOOL OF ENGINEERING AND TECHNOLOGY

Architectural Engineering  
Civil Engineering  
Electrical Engineering  
Mechanical Engineering  
Industrial Arts & Technology

BS  
BS  
BS  
BS  
BS

### SCHOOL OF EDUCATION

Business Administration  
Business Education  
Music Education  
Art Education  
Health, Physical Education and Recreation  
Administration, Curriculum and Instruction  
Psychology

BS  
BS  
BS  
BS  
BS  
BS  
BS

### THE GRADUATE SCHOOL

Agricultural Education  
Animal Science  
Plant Science  
Home Economics  
Biological Sciences  
Chemistry  
English  
History, Political Science and Geography  
Modern Foreign Languages  
Speech & Drama

MA Ed  
MS  
MS  
MA Ed  
MA, MS  
MS  
MA  
MA, MS  
MA  
MA, MS

Administration, Curriculum, and Instruction  
Health, Physical Education and Recreation  
Music  
Business Education  
Psychology

MA Ed  
MA Ed  
MS, MEd  
MA  
MS

Division of Extension and  
Continuing Education

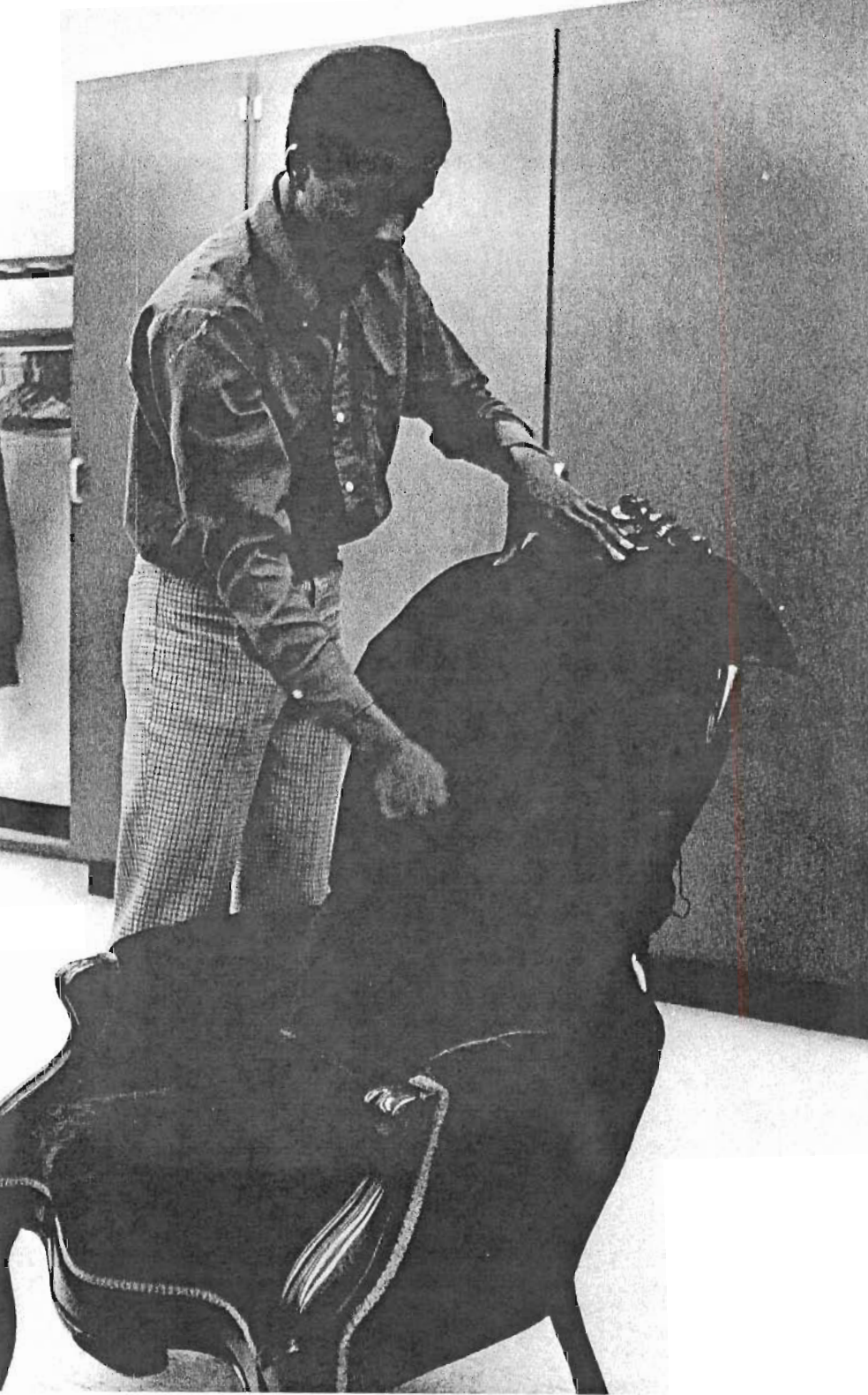
Conducts Conferences,  
Workshops, Short Courses—  
Special Education for Deprived  
groups, including off-campus  
Urban and Rural Community  
Programs

Department of  
Aerospace Studies

Air Force Reserve Officers  
Training Corps Program



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## THE SCHOOL OF AGRICULTURE AND HOME ECONOMICS

DAVID A. HAMILTON, Ed.D., Dean

The School accepts the aims of the University in striving to meet the needs, ideals and aspirations of its students. It accepts the responsibility of directing them in the various areas of the School and the University for instruction in the hope that a greater knowledge and understanding of human and natural resources will be obtained so that the individual, the State and the Nation will be benefited.

The School recognizes that the home and family life are fundamental and primary to the individual and to the survival of our economic structure. The School also recognizes the demand for nurses and attempts to help supply qualified registered nurses. Therefore, the School's philosophy is geared toward accepting the responsibility of preparing students for homemaking and the maintenance of better homes; for producing and processing more and better agricultural products; for satisfying careers in the field of nursing; for intelligent and respectful participation in the democratic way of life.

Instruction is offered in several general and specialized fields of agriculture, home economics, and nursing. The curricula provide training for students who desire:

- (1) to teach vocational agriculture and home economics;
- (2) to engage in agricultural and home economics extension;
- (3) to pursue specialized careers in home economics;
- (4) to pursue careers in nursing education.

The Bachelor of Science degree is offered in Agricultural Education and Economics, Animal Science, Biochemistry, General Home Economics, Home Economics Education, Child Development and Family Relationships, Clothing and Textiles, Foods and Nutrition (also the A.B.); Agronomy and Horticulture. The Associate in Arts degree is offered in Nursing.

The Master of Science degree is offered in Agricultural Education, Animal Science, Plant Science, and Home Economics Education. The Master of Arts in Education degree is also offered in Agricultural Education.



## DEPARTMENT OF AGRICULTURAL EDUCATION AND AGRICULTURAL ECONOMICS

GUL M. TELWAR, Ed.D., Head

The curriculum in Agricultural Education is designed primarily to prepare students to teach vocational agriculture in secondary schools of Tennessee. Students may major in Agriculture Education without taking the prescribed courses for teacher education. These students must complete a minimum of 198 quarter hours of credit. The University requires six (6) quarter hours of Physical Education, (one quarter hour during each quarter of the Freshman and Sophomore years), (9) nine quarter hours of English, three (3) quarter hours of Mathematics, (9) nine quarter hours of American History and Government. In addition, the University requires a minimum of 66 quarter hours in 300 and 400 level courses.

To qualify for teaching vocational agriculture in Tennessee, a student must complete all required courses which include 24 quarter hours of Agricultural Education and 27 quarter hours of Education. The Department offers the degrees: Bachelor of Science, Master of Science in Agricultural Education.



# CURRICULUM IN AGRICULTURAL EDUCATION

Freshman Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Agriculture III	3		
Health 151	3		
Art 133		3	
Music 131			3
Animal Science 101	3		
Plant Science 102			
Agri. Engr. 103			3
English 101-02-03	3	3	3
Math. 111-12-13 A	3	3	3
Physical Ed. 11-13	1	1	1
*Electives		3	3
Total = 48	16	16	16

Sophomore Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Psych. 242-243	3	3	
Education 201	3		
Agronomy 201-213	3		4
English 211-12-13	3	3	3
Horticulture 363			3
Physical Edu. 11-13	1	1	1
Bio. 101-103	3	3	
Poultry Husb. 201-202	3	3	
Agri. Economics 201			3
*Electives		3	3
Total = 49	16	16	17

Junior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Agri. Eco. 301-03	3	4	3
Agri. Engr. 302		3	
Horti. 201, 203	3		3
Education 301	3		
Psychology 312		3	
Animal Husb. 311	3		
Education 387			3
Agric. Educ. 371a,			
371b, 371c	3	3	3
History 201-2-3	3	3	3
Total = 52	18	16	18

Senior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Agronomy 401	3		
Psychology 463	3		
Agri. Eco. 401-403	4		3
Agri. Educ. 471-72		15	
Agri. Engr. 403	3		
Animal Husb. 401, 403	3		3
Education 462	3		
Horticulture 363			3
Agri. Educ. 450			3
*Electives			3
Total = 49	19	15	15

## AGRICULTURAL ECONOMICS

The curriculum in Agricultural Economics provides instruction in technical and scientific agriculture as combined with education in the use of economic principles and tools which improve the science and art of decision making. Agricultural Economics integrates principles, knowledge, and data which are useful in the solution of problems faced by agricultural firms and service agencies in the dynamic U.S. economy. Emphasis is placed on the management of agricultural production and marketing firms and on decision guides which lead to the greatest firm and social efficiency. Major areas of course work include: farm and business firm management, financial management, resource development, land use and valuation, agricultural marketing, policy and price analysis. The Bachelor of Science degree is offered in Agricultural Economics.

Majors in Agricultural Economics must complete a minimum of 198 quarter hours. The University requires six (6) quarter hours of Physical Education (one quarter hour during each quarter of the Freshman and Sophomore years), nine (9) quarter hours of English, three (3) quarter hours of Mathematics, and nine (9) quarter hours of American History and Government.



## CURRICULUM IN AGRICULTURAL ECONOMICS

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Agriculture III	3		
Health 151	3		
Art 133		3	
Music 131			3
Animal Science 101	3		
Plant Science 102		3	
Agri. Engr. 103			3
English 111-12-13			
Math. 111-12-13 A	3	3	3
Physical Ed. 11-12-13	1	1	1
or Air Science. 151-53			
*Electives		3	3
Total = 49	17	16	16

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Economics 211-12-13	3	3	3
Agronomy 201	3		
English 211-12-13	3	3	3
Agri. Eco. 201			3
Agronomy 213			3
Political Sci. 221-22	3	3	
Agriculture 203			3
Bio. 101-102	3	3	
Physical Ed. 11-13			
Air Sci. 151-53	1	1	1
Total = 48	16	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Agri. Eco. 301-303	3	4	3
Agri. Eco. 311	3		
Agri. Eco. 312		3	
Agri. Eco. 323			3
Agri. Engr. 301	3		
Accounting 211-12	3	3	
Math 161		3	
Amer. Hist. 201-203	3	3	3
English 323			3
Political Sci. 223			3
*Electives	3		3
Total = 50	18	16	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Agri. Eco. 401-403	4	3	3
Agri. Eco. 411	3		
Agri. Eco. 450		3	
Economics 302-304		3	3
Economics 401	3		3
Economics 404			3
Business Adm. 326	3		
Plant Science 401		3	
*Electives (300-400 level)	6	6	9
Total = 53	19	18	18

## AGRICULTURAL ENGINEERING

Curriculum in Agricultural Engineering is designed to prepare students to apply their knowledge of Mathematics and Science to create and design new systems and equipment for Agricultural production and processing.

Agricultural Engineering in the Department of Agricultural Education and Agricultural Economics is offered as a supporting area.

## DEPARTMENT OF ANIMAL AND PRE-VETERINARY SCIENCE

ROLAND NORMAN, Ph.D., Head

The department of Animal Science consists of two (2) areas of instruction, namely, Animal Husbandry and Biochemistry. A curriculum is offered in each of these areas. The courses are designed to give instruction in the principles of livestock production and management, sanitation and health and processing and caring for animal products. Students are trained for the successful operation of livestock and poultry enterprises as owners, dairy farm operators, herd managers, market milk producers, extension livestock specialists, and for employment as agricultural biochemists, animal nutritionists, and other research workers.



## CURRICULUM IN ANIMAL HUSBANDRY

A major in Animal Husbandry is offered leading to the degree of bachelor of science. To satisfy the requirements for the degree, the student must complete a minimum of 198 quarter hours. Not less than 36 hours must be completed in the major field, with a minimum of 15 hours in 300 and 400 level courses. Students who desire to minor in Animal Husbandry must complete a minimum of 18 quarter hours in the department. Work leading to the degree of master of science is also offered.

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Agriculture III	3			Agronomy 201-02	3	4	
Hist. 201-202	3	3		English 211-12-13	3	3	3
Art 133		3		Chemistry 111-12	4	4	
Music 131			3	Biochemistry 113			4
Animal Science 101	3			Poultry Husb. 201-02	3	3	
Plant Science 102		3		Horticulture 203			3
Agricultural Engr. 103			3	Agricultural Eco. 201	3		
English 101-02-03	3	3	3	Physical Ed. 20's-50's	1	1	1
Math 111-12-13	4	3	3	*Electives	1	3	7
Physical Ed. 11, 12, 13	1	1	1				
Amer. Gov't 221			3				
	17	16	16		18	18	18

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Biochemistry 301-02-03	4	4	4	English 321-22	3	3	
Poultry Husb. 302		3		Agronomy 401-03	3		3
Biology 241	4			Agricultural Engr. 301			3
Animal Husb. 321	3			Agricultural Eco. 312		3	
Agricultural Eco. 302		4		Animal Husbandry 322		3	
Animal Husb. 301-03	3		3	Animal Husb. 401-02-03	3	3	3
Animal Husb. 311-12-13	3	3	3	Animal Husb. 421-22-23	1	1	1
*Electives		3	6	Animal Husb. 450	3		
	17	17	16	*Electives	3	3	6
					16	16	16

### OPTION I

#### Pre-Veterinary Medicine

Students interested in Veterinary Medicine should, in addition of the courses listed in Animal Husbandry curriculum, elect the following courses.

Physics	12 quarter hours
Zoology	12 quarter hours
Embryology	3 quarter hours

### OPTION II

#### Courses in Poultry Husbandry

Students interested in specializing in Poultry Husbandry should use the following as electives in the Animal Husbandry curriculum.

Junior Year	
Poultry Husbandry 303	3 quarter hours
Poultry Husbandry 342	3 quarter hours
Senior Year	
Poultry Husbandry 403	3 quarter hours
Poultry Husbandry 422	3 quarter hours



## BIOCHEMISTRY CURRICULUM

### (Agricultural and Biological Chemistry)

ANDREW BOND, Ph.D., Coordinator

The curriculum in Biochemistry has the following threefold objective: (1) to offer courses for students in the several departments of the School of Agriculture and Home Economics, whose programs of study require such training; (2) to implement a program of training for students who wish to lay a foundation for and concentrate their major study in the field of biochemistry, medicine, veterinary medicine, molecular biology, agricultural chemistry, and nutrition; and (3) to provide instruction in the fundamentals of biochemistry for students in other departments of the University.

Students pursuing this curriculum must complete a minimum of 198 quarter hours for the bachelor of science degree, of which not less than 66 quarter hours must be in 300 and 400 level courses. A minimum of 52 hours must be completed in chemistry and biochemistry with a minimum of 15 hours in the 300 and 400 level courses. Students following this curriculum should select a minor consisting of a combination of courses above the 100 level from related fields of agriculture and the biological sciences, comprising not less than 18 hours approved by the major adviser.

Students who pursue this curriculum must arrange with their major advisers to take, in the freshman year, either Mathematics 161-2-3, or Mathematics 111-2-3 followed by 163 in the sophomore year. They should also arrange to take Chemistry 311-12-13 in the sophomore year to be eligible for the junior year biochemistry courses.

## BIOCHEMISTRY CURRICULUM

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Orientation III	3			Biology 111-2-3	5	5	5
Music 131		3		Chemistry 311-2-3	4	4	4
Art 133			3	English 211-2-3	3	3	3
Chemistry 111-2-3	4	4	4	Physical Education			
English 101-2-3	3	3	3	20's — 50's	1	1	1
Math 161-2-3	5	5	5	or Air Science 251-2-3			
or Equivalent				American History	3	3	3
Physical Education 11-2-3	1	1	1				
or Air Science 151-2-3							
Total = 48	16	16	16	Total = 48	16	16	16

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Chemistry 211-2-3	4	4	4	Biochemistry 411	4		
Physics 211-2-3	4	4	4	Biochemistry 402-3		4	4
Biology 241	5			Biochemistry 423			1
Biochemistry 302-3		4	4	Biochemistry 450		3	
*Electives	4	5	5	Chemistry 481	4		
				Electives	9	10	12
Total = 51	17	17	17	Total = 51	17	17	17

## DEPARTMENT OF PLANT SCIENCE AND CONSERVATION

FRED E. WESTBROOK, Ph.D., Head

The Department of Plant Science and Conservation is designed primarily to acquaint students with the principles of Plant Science and the Conservation of the renewable natural resources. The Curriculums are designed to give students a broad knowledge of the principles of Agronomic and Horticultural Sciences and the conservation of the renewable natural resources.

Two undergraduate curriculums are offered with majors in Agronomy and Horticulture. A Student seeking a major in either of these disciplines will structure his program in accordance with that curriculum.

A major may be pursued in either area of concentration leading to the degree of Bachelor of Science. A minimum of 198 quarter hours is required for the bachelor of science degree. Not less than 36 quarter hours must be completed in the curriculum

\* Students anticipating graduate school should take at least one year of Foreign Language.

of the student's choice with a minimum of 15 quarter hours in 300 and 400 level courses.

Graduate students may pursue studies in Plant Science leading to the Master of Science degree in Plant Science. A description of these requirements is found in the Graduate School bulletin.

Freshmen and Sophomores majoring in Agronomy or Horticulture will take courses as listed in the Plant Science Curriculum.

### CURRICULUM IN PLANT SCIENCE

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Course & Number	F	W	S	Course & Number	F	W	S
Ag. Orientation . . . . .	3			Agronomy 201-2-3 . . . . .	3	4	4
Hist. 201-202 . . . . .	3	3		Biology 101-2 . . . . .	4	4	
Art 133 . . . . .		3		Agronomy 213 . . . . .			4
Music 131 . . . . .			3	Chemistry 111-12-13 . . . . .	4	4	4
Animal Science 101 . . . . .	3			Ag. Econ. 201 . . . . .	3		
Plant Sci. 102 . . . . .		3		Poultry Hus. 201-2-3 . . . . .	3	3	3
Agric. Eng. . . . .			3	Physical Ed. 20's-50's . . . . .	1	1	1
English 101-2-3 . . . . .	3	3	3	or			
Math. 111-12-13 . . . . .	4	3	3	Air Sci. 251-2-3 . . . . .	1	1	1
P. E. 11-12-13 . . . . .	1	1	1				
or							
A. S. 151-2-3 . . . . .	1	1	1				
Amer. Gov't 221 . . . . .			3				
	<u>17</u>	<u>16</u>	<u>16</u>		<u>18</u>	<u>19</u>	<u>19</u>

### CURRICULUM IN AGRONOMY

**FRED E. WESTBROOK, Ph.D., Head**

The curriculum in Agronomy is designed to offer principles and experiences which will prepare students for successful competition in the agronomic sciences and the conservation of the renewable natural resources. The successful completion of this curriculum leads to the degree of bachelor of Science and provides opportunities for employment with the Federal Government, Soil Conservation Service, Farmers Home Administration, Agricultural Extension Service, Agricultural Research Service, private industry and other related fields.

Freshman and sophomore students take courses outlined in the plant science curriculum for freshmen and sophomores.

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Course & Number	F	W	S	Course & Number	F	W	S
Agronomy 301-2-3 . . . . .	3	3	3	Agronomy 401-2-3 . . . . .	4	4	3
Agronomy 311 . . . . .			4	Agronomy 411-12-13 . . . . .	1	1	1
Agric. Econ. 301-2 . . . . .	3	3		Ag. Eco. 401 . . . . .	3		
Biochem. 301-2 . . . . .	3	3		Animal Husb. 403-311 . . . . .		3	3
English 321-23 . . . . .	3		3	Agronomy 450 . . . . .	3		
Horticulture 201-2-3 . . . . .	3	3	3	Agronomy 321-2-3 . . . . .	3	3	3
Horticulture 343-363 . . . . .		3	3	Geology 361 . . . . .			4
Poultry Husb. 302 . . . . .		3		Social Sci. 203 . . . . .	3		
Elective . . . . .	3		3	Electives . . . . .		3	
	<u>18</u>	<u>18</u>	<u>19</u>		<u>17</u>	<u>14</u>	<u>14</u>

\* Electives will be chosen with approval of the adviser. Majors interested in a career in soil science will elect physics 211-12-13.

## CURRICULUM IN HORTICULTURE

HAZO W. CARTER, Ph.D., Coordinator

All freshman and sophomore students take courses outlined in the Plant Science Curriculum for freshmen and sophomores.

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Horticulture 201-2-3	3	3	3	Horticulture 343			3
Horticulture 302		3		Horticulture 401	3		
Horticulture 331-33	3		3	Horticulture 423			3
Horticulture 352-372	3	3		Horticulture 450	3		
Agronomy 323			3	Horticulture 451	3		
Biochemistry 312		4		Agronomy 303			3
Chemistry 361	4			Agronomy 401	4		
Philosophy 323		3		English 321-3	3		3
Political Science 313			3	*Electives		12	3
Poultry Husbandry 302		3					
Sociology 221-322	3		3				
Electives	3		3				
	19	19	18		16	12	15

## DEPARTMENT OF HOME ECONOMICS

MATTYE C. FLOWERS, M.S., Head

### GENERAL INFORMATION

The Department of Home Economics aims to guide students in developing sound and satisfying philosophies of life, using intelligence in solving personal and family problems, preparing for vocations, developing wholesome social relationships and enriching their general and cultural education. It seeks to relate knowledge from the natural and social sciences, the humanities, and the arts to the solving of contemporary problems facing individuals as consumers, family members and citizens.

The department is housed in a new building, completed in 1970, and has well-equipped classrooms and laboratories for both graduate and undergraduate work. In addition to the Home Economics Building, there is a modern Home Management Residence which provides practical experiences in solving problems of family living.

Students who transfer from other institutions to complete requirements for the bachelor of science degree with a major in any of the curricula of Home Economics must complete at this institution a minimum of one academic year and earn a minimum of 48 quarter hours of credit.

### STUDENT ORGANIZATIONS

Beta Sigma Chapter of Kappa Omicron Phi, National Honor Society for Home Economic majors, is open to majors who have attained the scholastic and other requirements necessary for membership.

The Home Economics Club, officially known as the Student Member Association of the American Home Economics Association, is open to all students majoring in any area of home economics. Home Economics Education majors are required to participate actively as an integral part of their training to become advisers of the Future Homemakers of America. The major purpose of the Student Member Association is to improve education for the profession of home economics. The organization gives a cash award annually to the member in each of the four college classes who has maintained the highest scholastic average above 3.0 for the year.

The following curricula lead to the degree of Bachelor of Science in Home Economics:

### I. CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

RUTH A. McDOWELL, M.Ed., Coordinator

The Curriculum in Child Development and Family Relationships offers opportunities

\* Electives will be chosen with approval of the adviser. Majors interested in a career in soil science will elect physics 211-12-13.

Students interested in specializing in ornamental horticulture should in addition to the courses listed in the horticulture curriculum elect the following courses: Agronomy, 213, 321, 322, Horticulture 303, 332, 363, 403, 453.

Students interested in specializing in Olericulture and Pomology should in addition to the courses listed in the Horticulture Curriculum elect the following courses: Agronomy 213, 321, 322, Horticulture 303, 332, 343, 402, 403, Foods 321.



for the study of the child and his family, with a nursery school as a laboratory for providing experiences in observing and guiding young children.

#### **OPTION I—CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS**

This option prepares students for: (1) work with children up to twelve years of age in nursery schools, day care centers and other institutions of various kinds; (2) Child Development and Family Relationships specialists at state and local levels, directors in religious work, girl scout leaders and (3) home and family living. One quarter work is spent doing a study tour at another college or university with an outstanding program.

#### **OPTION II—CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS**

##### **TEACHER EDUCATION CURRICULUM FOR KINDERGARTEN AND ELEMENTARY SCHOOLS**

Child Development majors desiring teacher certification in public school kindergartens and elementary school grades one through nine will, in addition to required Child Development courses (listed below), follow the Elementary Education Curriculum (School of Education) with the following substitutions: Bacteriology 241 for Natural Science 123, Child Development 460 for Education 381, Related Art 332 for Education 333, and Child Development 101 for Education 101.

Required Child Development Courses: 101, 321, 322, 332, 353, 371, 460, 461, 463, 464, Family Relationships 463.

#### **II. CLOTHING AND TEXTILES**

**GERALDINE B. FORT, M.A., Coordinator**

The curriculum in Clothing and Textiles offers courses designed to furnish a thorough knowledge of Clothing Textiles from the standpoint of health, comfort and economy. It enables the student to understand the contribution which clothing makes to social and professional success; to select and enjoy clothes as an expression of beauty; and to construct them for creative self-expression.

It opens many possibilities to students who wish to use clothing in a general sense for their personal and family development, to those who have a well-defined vocational aim, and to those who anticipate graduate study.

A Bachelor of Science degree is offered in Clothing and Textiles. Two Hundred and two (202) quarter hours are required for an undergraduate major, fifty-four (54) of which must be in Clothing and Textiles (including Related Art). See the curriculum for specific requirements.

For a minor in Clothing and Textiles, twenty-seven (27) hours of credit in courses approved by the major and minor professors are required.

#### **III. FOODS AND NUTRITION**

**MIRIAM G. TOWNS, M.S., Coordinator**

The objectives of the curriculum in Foods and Nutrition are threefold: To develop in each student (1) a sound, basic, up-to-date knowledge in the fields of foods and nutrition, (2) the ability to interpret these basic facts and apply sound judgment to their translation to actual situations, and (3) the skills and techniques required to apply these basic principles to methods of preparation.

The curriculum in Foods and Nutrition leads to the degree of bachelor of science or bachelor of arts in Foods and Nutrition. The undergraduate major consists of a total of 203 quarter hours, 67 of which are courses in the 300 and 400 series. A minimum of 39 quarter hours must be taken in Foods and Nutrition, 15 of which must be taken in the 300-400 series.

The curriculum in Foods and Nutrition meets the requirements of the American Dietetic Association for entrance into an approved dietetic internship. It also meets the requirements of the liberal education core for students majoring in non-teaching fields.

#### **IV. HOME ECONOMICS EDUCATION**

**MATTHEE C. FLOWERS, M.S., Coordinator**

The curriculum in Home Economics Education is designed for students who plan to teach home economics. This teacher education curriculum meets the requirements

set up by the State Board of Education for the teaching of home economics in Tennessee and qualifies graduates to teach in vocational schools under the requirements of the Federal Vocational Acts.

The undergraduate major consists of 209 quarter hours, 101 of which are in the 300 and 400 series. A minimum of 100 quarter hours must be taken in home economics and related subjects, 77 of which are in the 300 and 400 series.

#### OPTION I—VOCATIONAL HOME ECONOMICS

#### OPTION II—OPTION FOR CERTIFICATION OF HOME ADVISERS

Home Economics Education majors desiring to qualify for Home Advisers with the Farmers Home Administration under the U. S. Department of Agriculture must attend one summer session (both terms) in addition to the regular four-year schedule. It is recommended that the student attend the summer session following completion of the sophomore year. The following courses are required: Social Welfare 341, 342, 351, 352; Sociology 221.

### V. GENERAL HOME ECONOMICS

#### OPTION FOR GENERAL HOME ECONOMICS

The option in General Home Economics is provided for students who have a decided interest in home economics but do not wish to teach. As a major field, General Home Economics offers a fertile background for the increasing demands of industry, business, advertising and other services in the profession. Program offerings for the first two years are identical to those of Home Economics Education.

At least fifteen hours of home economics electives should be in the 300 and 400 series.

#### MINORS

For a minor in Clothing and Textiles, twenty-seven (27) hours of credit in courses approved by the major and minor professors are required.

For a minor in Related Art, twenty-seven hours in approved courses are required. Information regarding a minor in Related Art may be secured from Related Art Instructor.

### CURRICULUM IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

Freshman Year	Quarter Hours Credit		
	I	II	III
Name of Course			
English 101-2-3	3	3	3
Clothing 112-13	3		3
Art 133			3
History 202		3	
Chemistry 111-112	4	4	
Home Ec. 101-2-3 or 201	1	2	
Mathematics 111-12	4		3
Music 131			3
Physical Ed. 11-12-13	1	1	1
Child Dev. & Family Rel. 101		3	
	<hr/> 16	<hr/> 16	<hr/> 16

Junior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Political Science 221	3		
Foods & Nut. 433	3		
Home Mgt. 323-421-422	3	3	4
Economics 304			3
Child Dev. & Family Rel. 353-452-465	3	3	3
Child Dev. & Family Rel. 321-322	3		3
Psychology 311		3	
Electives	3	3	3
Psychology 263		3	
History 203		3	
	<hr/> 18	<hr/> 18	<hr/> 16

Sophomore Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Education 201	3		
English 211-12-13	3	3	3
Zoology 202-203		5	5
Bacteriology 241	5		
Psychology 221-222-243	3	3	3
Speech 201 or 202			3
English 261		3	
Nutrition 211			3
Art 201	3		
Anthropology 221		3	
Phy. Ed. 20-50	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

Senior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
Education 465	3		
Poultry Husbandry 302	3		
Sociology 452			3
Child Dev. & Family Rel. 463-461 or 462	3		3
Child Dev. & Family Rel. 460-466	3		6
Child Dev. & Family Rel. 464	3		
Senior Project 450	3		3
Electives		18	
	<hr/> 18	<hr/> 18	<hr/> 15

## CURRICULUM IN CLOTHING AND TEXTILES

Freshman Year	Quarter Hours Credit		
Name of Course	I	II	III
English 101-2-3	3	3	3
Clothing 111-12-13	3	3	3
Rel. Art 201, 203		3	3
Math. 111	4		
*French 101-2-3 or 201-2-3	4	4	4
History 201-2		3	3
Home Ec. 101-2 or 201	1	2	
Phy. Ed. 11, 12, 13	1	1	1
	<u>16</u>	<u>19</u>	<u>17</u>

Sophomore Year	Quarter Hours Credit		
Name of Course	I	II	III
English 211-12-13	3	3	3
Clothing 211-12	3	3	
Clothing elective			3
Chemistry 111-12-13 or other science	4	4	4
Fds. & Nutr. 111-12, 211	3	3	3
Psych. 221-22	3	3	
Art 133			3
Phy. Ed. 20s-50s	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Junior Year	Quarter Hours Credit		
Name of Course	I	II	III
English 272	3		
English 301-2 or 321-22		3	3
Clothing 312, 320-21	3	3	3
Rel. Art 323	3		
H. Mgt. 322		3	
Philosophy 323			3
Pol. Sci. 221	3		
Psych. 323			3
CDFR 322		3	
Speech 201 or 202	3		
Electives (300-400 level)	3	6	6
	<u>18</u>	<u>18</u>	<u>18</u>

Senior Year	Quarter Hours Credit		
Name of Course	I	II	III
Clothing 401	3		
Clothing 413			3
Sr. Proj. 450		3	
Rel. Art 421	3		
CDFR 463			3
H. Mgt. 433		3	
Clothing electives	3	3	
Electives (300-400 level)	6	6	9
	<u>15</u>	<u>15</u>	<u>15</u>

## CURRICULUM IN FOODS AND NUTRITION

Freshman Year	Quarter Hours Credit		
Name of Course	I	II	III
Related Art 201-203	3	3	3
Home Economics 101-102-103 or 201	1	2	
Clothing 111			3
Foods 111-112	3	3	
Chemistry 111-112-113	4	4	4
Mathematics 111-112-113	4	3	3
History 201			3
Physical Education 11-12-13	1	1	1
	<u>16</u>	<u>16</u>	<u>17</u>

Sophomore Year	Quarter Hours Credit		
Name of Course	I	II	III
English 211-212-213	3	3	3
Zoology 202-203		5	5
Clothing 112	3		
Bacteriology 241	5		
Psychology 242-243		3	3
Nutrition 211			3
Foods 223	3		
Education 201		3	
Art 133 or Music 131		3	
History 202	3		
Physical Education 20's 50's	1	1	1
	<u>18</u>	<u>18</u>	<u>15</u>

Junior Year	Quarter Hours Credit		
Name of Course	I	II	III
Related Art 201-203	3		3
Speech 201 or 202	3		
Chemistry 361	4		
Family Economics 322		3	
Political Science 221	3		
Foods 311		3	
Foods 312			3
Nutrition 311	3		
Biochemistry 313			5
Child Development 351-352	3	1	
Accounting 211-212		4	4
Economics 211		3	
Home Economics Education 371A-371B		3	3
	<u>19</u>	<u>17</u>	<u>18</u>

Sophomore Year	Quarter Hours Credit		
Name of Course	I	II	III
Nutrition 411	3		
Sociology 322		3	
Foods 313	3		
Foods 321		3	
Foods 352			3
Foods 452	3		
Foods 412		3	
Nutrition 433			3
Nutrition 453		3	
Nutrition 450	3		
Business Adm. 423	3		
Philosophy 323	3		
Home Management 421-422		3	4
Electives			6
	<u>18</u>	<u>15</u>	<u>16</u>

\* If High School record does not show 2 years of foreign language



## CURRICULUM IN HOME ECONOMICS EDUCATION

Freshman Year				Sophomore Year			
		Quarter				Quarter	
		Hours	Credit			Hours	Credit
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	Education 201	3		
Clothing 111-112	3		3	Economics 211		3	
Related Art 201		3		English 211-12-13	3	3	3
Foods 111-112		3	3	Clothing 211 or 212	3		
Chemistry 111-112	4	4		Bacteriology 241	5		
Home Economics 101-2 or 201	1	2		Zoology 202-203		5	5
Mathematics 111-12	4		3	Psychology 242-3	3	3	
History 201			3	History 202			3
Physical Education 11-12-13	1	1	1	Art 133		3	
				Nutrition 211			3
				Foods 223			3
				Physical Education			
				20's - 50's	1	1	1
	16	16	16		18	18	18

Junior Year				Senior Year			
		Quarter				Quarter	
		Hours	Credit			Hours	Credit
Name of Course	I	II	III	Name of Course	I	II	III
Related Art 203	3			Related Art 400	3		
Home Management 321		3		Child Development 452	3		
Education 462			3	Family Relationships 463			3
Clothing 321	3			Home Management 422			4
Child Development 351	3			Home Economics			
Psychology 312	3			Education 450			3
Home Management 320-322	3	3		Home Economics		12	
Chemistry 361	4			Education 471			
Sociology 211			3	Home Economics			
Home Economics				Education 472	3		
Education 371A-371B		3	3	Foods 412 or 431			3
Nutrition 311		3		Related Art 421	3		
Political Science 221			3	Psychology 463	3		
Philosophy 323		3		Electives	6		6
Speech 201 or 202		3					
Electives			6				
	19	18	18		18	15	19

## CURRICULUM IN GENERAL HOME ECONOMICS

### Freshman and Sophomore Years Same As Home Economics Education

Junior Year				Senior Year			
		Quarter				Quarter	
		Hours	Credit			Hours	Credit
Name of Course	I	II	III	Name of Course	I	II	III
Mathematics 113	3			Related Art 323	3		
Speech 201 or 202			3	Related Art 400			3
Physics 111	3			Child Development 452	3		
Child Development 351	3			Child Development 464		3	
Home Management 321		3		Family Relationships 463		3	
Home Management				Home Management 422	4		
300-320-322	3	3	3	Home Economics			
Chemistry 361	4			Education 450		3	
Clothing 321		3		Related Art 421	3		
Home Economics				Foods 412 or 431			3
Education 371A-371B		3	3	Foods 452			3
Political Science 221		3		Electives	3	9	6
Philosophy 323		3					
Foods 352	3						
Sociology 211			3				
Electives			6				
	19	18	18		16	18	15

## **The Department of Nursing Education**

**DOROTHY COLEY EDMOND, M.S., Head**

The Department of Nursing Education offers a Two-Year Registered Nurse Program. The student is granted the Associate in Arts Degree in Nursing at the end of the summer session of the second year.

The nursing program is based upon the philosophy that nursing is one of the helping professions, the purpose of which is to help individuals to conserve life and maintain health. If the increasing health needs of society are to be met, the nurse must be adequately prepared in her selected field of work. She must possess knowledge and technical skills that will enable her to give safe patient care in a staff nursing position in health agencies.

The faculty recognizes that there are varied social economic backgrounds and intellectual potential among our students and prospective students. We therefore, believe that significant adjustments will be necessary in order to meet the needs of the learner and society. Quality nursing care to patients must not be sacrificed in the preparation of this nurse.

### **Admission Requirements**

Applicants must meet all other general requirements for admission to the University. A minimum grade of "C" in the following high school courses is required: 3 units of English and one unit each of American History, general mathematics, physics, and chemistry. Applicants who are 21 years of age or older, who may have discontinued high school before graduation may be admitted to college by taking the G.E.D. High School Equivalency Examination, and earning a score that qualifies the student for a high school diploma in the State of Tennessee. A minimum average score of 50 is required. Applicants must have a successful personal interview with a member of the Nursing Education faculty. Applicants who have not taken physics and chemistry in high school may enroll in a basic chemistry course and a foundation of physics course in the University.

### **Degree Requirements**

Candidates for degrees must complete a minimum of 118 hours of prescribed work for the Three Year Plan and 115 hours for the Two Year Plan; 54 quarter hours of general education and 64 quarter hours in nursing for the Three Year Plan student and 61 quarter hours for the Two Year Plan student.

The members of the nursing faculty offer instruction and guidance in laboratory experience at George W. Hubbard Hospital—Meharry Medical College, Veterans Administration, Clover Bottom Hospital and School, Central State Hospital, Bill Wilkerson Speech and Hearing Center, Lentz Health Center, and Junior League Home for Crippled Children.

The courses in nursing are combined with theoretical and laboratory experience to prepare the student to give direct nursing care of patients in the five major clinical areas; medicine, surgery, obstetrics, pediatrics and psychiatry.

The general education courses consist of English composition, speech, physical education, nutrition, social psychology, sociology, philosophy, anatomy and physiology.

A student in good standing must maintain a two point average and acquire a minimum grade of "C" for each course in nursing. A student who earns a "D" or "F" in a nursing course, must repeat the course.

Candidates for graduation must file "Second Year" forms with the Office of Admissions and Records at least six months prior to the date of graduation.

Candidates for graduation must receive a score of fiftieth percentile in the following National League for Nursing Achievement Tests.

Obstetrics

Pediatrics

Basic Medical Surgical Nursing

Psychiatric Nursing

Graduates are eligible to take the State Board Examination to obtain the Registered Nurse (R.N.) Certificate.

### Three Year Plan

The Three Year Plan of nursing will provide the student who is unable to complete the program within two years an opportunity to earn an Associate of Arts Degree in Nursing.

The following students will be advised to enter the Three Year Plan:

Students who have an ACT score below 12.

Students who are employed on a 40 hours per week basis. Students in this category who score 17 ACT and above may be considered as candidates for the Two Year Plan.

Students who meet the requirements for the Two Year Plan but who do not enter the University until after the Fall Quarter will be admitted to this plan.

Students in this plan are eligible to enroll in Nursing Fundamentals I fall quarter of the second year if they have a cumulative average of 2.5 or if they have completed all of their general educational requirements.

### Course Offerings

FIRST YEAR		SECOND YEAR	
Fall Quarter	Credit	Fall Quarter	Credit
English 101	3	Nursing 201 (4 hrs. lec., 16 hrs. lab.)	8
Physical Ed. 11	1	General Bact. 241	5
Nursing Orientation 101A	1		
Nursing 104 (8 hrs. lab, 3 hrs. lec.)	5		
Zoology 202	5		
	15		13
Winter Quarter	Credit	Winter Quarter	Credit
English 102	3	Nursing 202 (4 hrs. lec., 15 hrs. lab.)	8
Physical Ed. 12	1	C. O. 351 Young Child & Family	3
Nursing Orientation 102A	1	Philosophy	3
Nursing 105 (3 lec. hrs. 8 hrs. lab.)	5		
Zoology 203	5		
	15		14
Spring Quarter	Credit	Spring Quarter	Credit
English 103	3	Nursing 203 (5 hrs. lec., 15 hrs. lab.)	9
Physical Ed. 13	1	Social Psychology 351	3
Nursing Orientation 103A	1	General Ed. Elective	3
Nursing 106 (3 hrs. lec., 12 hrs. lab.)	6		
Nutrition 211	3		
	14		15
Summer Session I	Credit	Summer Session I	Credit
Nursing 107 (4 hrs. lec., 16 hrs. lab.)	4	Nursing 204 (6 hrs. lec., 16 hrs. lab.)	5
Speech 202	3	General Ed. Elective	3
	7		8
Summer Session II	Credit	Summer Session II	Credit
Nursing 108 (4 hrs. lec., 16 hrs. lab.)	4	Nursing 205 (4 hrs. lec., 16 hrs. lab.)	4
Sociology 211	3	General Ed. Elective	3
			7

### NURSING

**Nursing Orientation. 101A-102A-103A.** (3) A course required of all freshmen registered in the Department of Nursing Education designed to orientate the student to the program at Tennessee State University.

**Nursing Orientation. 101B-102B-103B.** (6) Same as above but some emphasis will be placed upon individual student needs.

**Nursing 104 Fundamentals I.** (5) Is a basic course in nursing designed to help student develop an understanding of the physical, biological, social, and behavioral sciences. The student is given an opportunity to apply fundamental concepts gained from knowledge of these sciences to all clinical nursing areas. Emphasis is placed on meeting the needs common to all patients. (Offered fall and winter quarter).



Through a variety of approaches such as the use of problem solving process, developing skills in interpersonal relations, multiple assignments, pre- and post-conferences in the clinical laboratory, experience.

**Nursing 105 Fundamentals 2.** (5) A continuation of 104. Nursing 105 introduces basic causes of disease and focuses upon the body's physical and mental responses to illness. The course focuses upon the physical and psychosocial effects of illness on the individual at different levels of development.

Medical, surgical, pediatric, and mental health concepts are integrated in the course. Clinical laboratory experience—8 hrs., theory—3 hrs. (offered winter and spring quarter.)

**Nursing 106 Fundamentals 3.** (6) A continuation of 105. 3 hrs. theory, 12 hrs. clinical laboratory experience. (Offered spring and fall quarter.)

**Nursing 107 Fundamentals 4.** (4) Designed to assist the student to develop knowledge and understanding of basic psychiatric nursing principles and skills. The course includes content in regard to the needs, feelings and behavior of the student as well as those of the patient. The etiology, treatment, and prevention of mental illness are included. The behavioral approach to psychiatric problems is emphasized. Learning experiences in a state psychiatric hospital are provided with concurrent theoretical presentation. Individual conferences will be held to assist the student in evaluation of the patient's actions and her personal actions.

**Nursing 108 Fundamentals 5.** (5) Is a continuation of 107. Offered Summer Session II. Field trips will be made during this session. 12 hrs. clinical laboratory and 4 hours theory each Summer Session.

**Nursing 201 Advanced Nursing I.** (8) A study of the nursing care of the adult patient with acute and chronic health problems. Includes the principles of nursing care derived from the pathology and physiology of disease. Provides the student with opportunities to apply knowledge and skills in the care of ill patients with identical or similar illnesses. The student is stimulated to think critically, to solve nursing problems, to identify basic nursing functions needed to help patients to cope with their problems, and to make appropriate judgments. Individual conferences will be held to assist the student in evaluation of her personal actions. Each student will participate in pre- and post-conferences, field trips. (7 hours of theory and 16 hours of clinical laboratory). (Offered fall and winter quarter).

**Nursing 202 Advanced Nursing 2.** (8) Major concern is with the normal aspects of maternal and infant nursing care with consideration given to the complications and deviations from the normal.

The family health concept is used because each student is a potential parent and the family is the basic unit in society. The effect of the normal as well as the effect of complications and deviations is stressed, by including the physiological, psychological, social, and spiritual needs of the mother, infant and other members of the family. Various clinical areas are provided so that the student under supervision, can observe and/or assist in the care of the mother and infant at various stages of the maternity cycle: physician's office, prenatal clinic, post partum clinic, well infant clinic, planned parenthood clinic, and other community agencies whenever indicated. (4 hours of theory and 16 hours of clinical laboratory.) (Offered winter and spring quarter).

**Nursing 203 Advanced Nursing 3.** (9) A study of the complex nursing care problems of the child from the toddler through adolescence, and the effect the child's illness has on the family. Emphasis is placed upon the parent-child nurse-relationship. (5 hours theory and 16 hours of clinical laboratory). (Offered winter and spring quarter).

**Nursing 204 (5) & 205 (4) Advanced Nursing 4 & 5.** A planned experience designed to provide opportunities for the student to cooperate with members of the health team in the nursing care of the seriously ill. Includes experiences designed to increase the student's confidence in her ability to function as a contributing member of the health team.

Comprehensive nursing examinations will be given during this experience. In order to be considered as a candidate for graduation each student must attain a minimum score at the fiftieth percentile.

Each student will participate in pre- and post-conferences, seminars, and conferences under the supervision of faculty. Nursing 204—offered Summer Session I—6 hours of theory and 16 hours clinical laboratory. Nursing 205—offered Summer Session II—4 hours of theory and 16 hours of clinical laboratory.

## **AGRICULTURAL EDUCATION**

**371a. Survey and Analysis of Community Agriculture Problems.** (3) A study and analysis of current problems affecting farmers and prospective farmers in selected communities. Such

problems will serve as a basis for planning teaching units and supervised farm visits in vocational agriculture. Field work is required.

**371b. Material and Methods in Special Rural Education.** (3) A study of the factors which must be considered in determining what to teach and how to teach out-of-school rural youths and adults.

**371c. Planning Programs of Vocational Education in Agriculture.** (3) A study of the principles and practices involved in organizing and developing an annual and long-time program of work. Special attention is given to each major phase of vocational education in agriculture, with emphasis placed on ways and means of solving problems encountered by farmers and prospective farmers of given communities. Field work is required.

**\*401a. Educational Exhibits.** (1) (Lettering and Layout Design and Color) An appreciation for color as related to use in displays.

**\*401b. Educational Exhibits** (1) (Graphic Presentation) Charts, graphs, maps, placards, panels, photographs and transparencies are the graphic presentations considered.

**\*401c. Educational Exhibits.** (1) (Portable Exhibits) Selected problems in extension education, including window displays, one-day shows, bulletin board displays and paper sculpture.

**433. Methods of Organizing and Directing Supervised Farming Programs.** (3) Designed to give students a broad concept of planning comprehensive supervised farming programs in agriculture.

**450. Special Problems in Vocational Agriculture.** (3) A specific research problem dealing with some phase of agricultural education or other fields in agriculture is selected to offer the student some experience in research.

**471. General Methods and Class Management in Vocational Agriculture.** (3) This course offers the student partial experiences in preparing instructional units and classroom management material for vocational agriculture classes to be adapted to given communities.

**472. Student Teaching in Agricultural Education.** (12) A course designed to familiarize and give experience to prospective teachers of vocational agriculture in all phases of the program.

## **AGRICULTURAL ECONOMICS**

**201. Introduction to Agricultural Economics.** (3) Application of principles and methods of economics to farm organization, management, land tenure, marketing finance, and insurance; evaluation of politics, programs and institutions concerned with agriculture.

**301. Agricultural Marketing.** (3) A study of the historical development of agricultural marketing; characteristics of consumer demand and the agricultural supply; channels and agencies of distribution; and the costs, functions, and services involved in marketing farm products.

**302. Farm Management.** (4) A study of the operation of farming as a business, analysis of farm records and accounts; factors affecting profits and size of the farm business; ways of getting started in farming.

**303. Elementary Agricultural Statistics.** (3) Introduction to statistical principles, probability, sampling, probability distribution, correlation, regression and analysis of variance.

**311. Farm Records and Accounts.** (3) A study of the principles and techniques involved in keeping farm records and accounts, inventory, compiling, analyzing and interpreting farm financial and operating statements.

**312. Marketing Methods and Problems.** (3) A study of the methods and economic factors involved in the marketing of farm crops, poultry, eggs, livestock, and dairy products; marketing system and marketing costs, supply and demand, marketing cost reduction. Prerequisite: Agricultural Economics 301.

**322. Farmers' Cooperative.** (3) A study of the history and present status of farmers' cooperatives, what they have done and tried to do for farmers; their problems, finance, and control.

**323. Land Economics.** (3) A study of the income, valuation, taxation, and classification of land with special emphasis upon the land in Tennessee. Consideration will be given to the economic principles of conservation, minerals, and power resources.

**401. Tabular and Graphic Presentation of Data.** (4) A study of the principles involved in the collection, tabulation, and interpretation of agricultural data with special emphasis upon the construction and use of tables, charts, and graphs.

**402. Agricultural Prices.** (3) Concerned with the analysis of prices of farm products to other prices. Consideration is given to agricultural outlook, production cycles, and price forecasts.

\* Designed for Extension and Continuing Education

**403. Agricultural Finance.** (3) A study of the kinds and sources of credit for farmers; costs, risks, and returns in agricultural finance.

**411. Agricultural Policy and Programs.** (3) A study of the local, state and federal agricultural policies and programs with emphasis on techniques and procedures.

**450. Senior Project in Agricultural Economics Research.** (3) A study and discussion of senior projects on which students have been working (under direction) for at least one quarter.

#### **AGRICULTURAL ENGINEERING**

**103. Agricultural Engineering.** (3) The fundamental principles of agricultural engineering dealing with skill, judgment and resourcefulness in the areas of farmshop work, farm power machinery, farm buildings, rural electrification, and soil and water management. One lecture and two laboratory periods.

**301. Farm Mechanics.** (3) The repair, operation and construction of tillage, seeding, and harvesting machinery, and such service implements as wagons, manure spreaders, and fertilizer distributors. A part of this course includes a study of the construction, operation, and servicing of gas engines and tractors in the laboratory. One lecture — two laboratory periods.

**302. Maintenance and Adjustment of Farm Machinery.** (3) A course for those who expect to become farm managers, operators or vocational agriculture teachers. Adjustments and repairs of farm machinery. Theory and practice in electric arc and acetylene welding. One lecture — two laboratory periods.

**303. Planning Low Cost Housing.** (3) Determining the functional requirements of farm houses for given situations, size and arrangements of rooms, location and size of doors, windows, electrical outlets and water supply. Planning principles, materials and finishes. Emphasis on low cost housing as provided for in the Federal Housing Act, especially for home economics, business administration and agriculture students who expect to teach or become affiliated with the Agriculture Extension Service or the Farmers Home Administration. One lecture — two laboratory periods.

**400. Special Problems.** (3) A student chooses a problem requiring laboratory or field work with special laboratory research. Offered during any quarter. **Prerequisite:** Approval of department heads. One lecture — two laboratory periods.

**403. Farm Buildings, Equipment and Conveniences.** (3) Elementary scale drawing and plan reading, farmstead layout, operation and maintenance of electric equipment; functional requirements of farm houses, shelters, and storages; water systems; septic tanks and sewage disposal; heating, cooling, etc. One lecture — two laboratory periods.

#### **ANIMAL HUSBANDRY**

**211. Riding Light Horses.** (3) Designed for men and women in the University who are interested in horseback riding. Elementary principles in feeding, housing, training and riding light horses given, the proper care and adjustment of riding equipment also stressed. One lecture and two laboratory periods.

**301. Principles of Dairying.** (3) A study of the place of dairying in agriculture, utilization of dairy products, breeds of dairy cattle, composition of milk, processes of dairy manufacturing, herd management and the relationship of the farm to dairy herd operation. Two lectures and one laboratory period.

**302. Livestock Management.** (3) Nutrient requirements for farm animals, livestock feeds, nutrient contents, and factors affecting value, management, marketing procedures and practices. 2 lectures and one laboratory.

**303. Animal Breeding.** (3) A study of the physiology of reproduction, heredity and environment, genetics of domestic animals, lethals, methods of selection with different classes of livestock and mating systems, and functions of the progeny test. **Prerequisite:** Biology 311. Three lectures.

**311. Feeds and Feedings.** (3) A study of the basic principles of feeding farm animals, feeding standards, balancing rations, composition and nutritive value of feeds. Two lectures and one laboratory period.

**312. Livestock Fitting and Judging.** (3) Designed to teach the principles and provide practices in training, fitting and judging livestock. One lecture and two laboratory periods.

**313. Diseases and Parasites.** (3) A study of the causes, symptoms, and treatment of general diseases and parasites of livestock and poultry with special emphasis on sanitation. **Prerequisite:** Biology 241. Two lectures and one laboratory period.

**321. Swine Production.** (3) A study of the breeding, management, feeding and marketing of swine. Emphasis placed on both purebred and commercial production. Two lectures and one laboratory period.



**322. Beef Cattle Production.** (3) History, development, and distribution of breeds; sources of cattle and carcass beef, production and distribution in cattle feeding, commercial and purebred breeding herds. Performance testing and S-10 Beef Cattle Programs. Two lectures and one laboratory period.

**323. Evaluation and Judging Dairy Products.** (3) Composition, use, market grades, methods of storage and factors affecting keeping quality of dairy products, judging, scoring, and placing dairy products in accordance with their values.

**401. Market Milk.** (3) A study of the procurement, processing and sale of milk and the bacteriological, chemical and physical aspects of market milk processing, prerequisites: A.H. 301 Two lectures and one laboratory period.

**402. Science of Meat.** (3) Composition, physical, chemical and nutritional properties of meat and meat products. Biochemical alterations of meat during aging, curing, processing and storage.

**403. Dairy Farm Operations.** (3) A study of general farm operation, adaption of the herd to available facilities, factors affecting production, balancing rations for dairy cattle, disease control, principles of modern dairy cattle breeding, arrangement and development of dairy farm buildings. Prerequisites: Animal Husbandry 311. Two lectures and one laboratory period.

**421-22-23. Seminar.** (3) Devoted to discussions of current literature and problems in animal husbandry. Required of seniors majoring in the department. One hour credit each quarter. One lecture.

**450. Senior Project.** (3) Required of all Animal Husbandry majors.

**451. Physiology of Reproduction.** (3) Fundamental principles of the physiology of reproduction with primary emphasis on farm animals. Anatomy of the male and female reproductive tract; hormones, estrus and estrus cycle; ovulation, gestation, parturition, lactation, fertility, sterility and artificial insemination.

#### **COURSES IN POULTRY HUSBANDRY**

**201. Principles of Poultry Production.** (3) The principles and practices underlying reproduction and growth of the domestic fowl; also the study of breeds, varieties, and types of poultry. Required of all majors in Agriculture. Two lectures, and one laboratory period.

**202. Principles and Practices of Incubation and Brooding.** (3) Designed to give the environmental factors affecting incubation, embryo development, operation of incubators, and methods of brooding. Required of majors in Agriculture. Two lectures and one laboratory period.

**302. Animal and Plant Genetics.** (3) A study of the fundamental laws of heredity and their relation to plants and animals. Two lectures and one laboratory period.

**303. Processing Poultry Products.** (3) A detailed study of grades and classes of market poultry and eggs; methods of processing, storage, preservation; and problems in plant operations. Two lectures and one laboratory period.

**342. Hatchery Management.** (3) Includes the history, development, and operation of incubators, also egg supply, hatchery records, and accounts, and the sale of chicks. Two lectures and one laboratory period.

**403. Poultry Hygiene and Sanitation.** (3) Designed to give the major principles underlying sanitation and disease prevention as applied to the poultry farm. Two lectures and one laboratory period.

**422. Poultry Nutrition and Feeding.** (3) Designed to give the students the major principles of poultry nutrition, including the nutrients required by poultry and means of supplying these nutrients under practical feeding conditions. Poultry feedstuffs, ration formulation, and feeding practices considered. Two lectures and one laboratory period.

#### **BIOCHEMISTRY**

**113. Applied Chemistry.** (4) An introductory study of organic, inorganic, and biochemistry. Emphasis is placed on the chemical concepts and principles used in applied sciences. Open to students majoring in nutrition, medical technology, nursing education, health and physical education, etc. Three lectures and recitations, and two laboratory periods per week.

**301. General Agricultural Biochemistry.** (4) Introduces the student to the essentials of agricultural and biological chemistry as applied to animal and crop production. Prerequisites: Chemistry 111-12-13 and General Biology or Zoology and Botany. Required of agricultural education majors. Three lectures and recitations and two laboratory periods per week.

**302-3. Fundamentals of Biochemistry.** (8) An introductory study of the chemical nature of the constituents of protoplasm. A survey of mineral and organic foods and of nutritions. Required of majors in agricultural biochemistry, animal husbandry and poultry husbandry.

Elected by students in other science fields. Prerequisites: General Chemistry, Organic Chemistry, and Biology or Zoology. Three lectures and two laboratory periods per week.

**312. Quantitative Agricultural Chemistry.** (4) Deals with certain aspects of quantitative chemistry as applied to agricultural and food analysis. Prerequisites: Chemistry 111-12-13. Required of majors in agronomy and horticulture. Two lectures and two laboratory periods per week.

**313. Physiological Chemistry.** (5) Presents the fundamentals of human physiological chemistry. Required of majors in foods and nutrition. Prerequisite: Chemistry 361. Three lectures and recitations, and two laboratory periods per week.

**402-3. General Biochemistry.** (8) A comprehensive study of the chemistry and biochemistry of carbohydrates, lipids, proteins, enzymes, vitamins and minerals important in the metabolism and nutrition of animals and plants. Required of biochemistry majors. Prerequisites: Chemistry 111, 112, 113, 211-12-13, 311-12-13; Biochemistry 302-3. Three lectures and two laboratory periods per week.

**411. Biochemical Analysis.** (4) Designed to familiarize the student with the principles and practices involved in the analysis of agricultural and food products and other biological materials. Prerequisites: Analytical and Organic Chemistry; and Biochemistry 302-3. One lecture and three laboratory periods per week.

**423. Seminar.** (1) A discussion by the students of biochemical literature understandable on the senior level. One meeting per week.

**450. Senior Project in Biochemistry.** (3) A special laboratory investigation is carried out under the direction of the instructor and the results are written up scientifically. Required of candidates for the bachelor's degree with majors in biochemistry. Hours arranged.

## **AGRONOMY**

### **Soil Science**

**202. Soil Genesis and Morphology.** (4) A study of the origin, structure and general nature of soils and their relation to plants. Three lectures and one laboratory period.

**203. Soil Fertility.** (4) A study of soil factors as related to soil fertility maintenance, and fertilizer practices. Three lectures and one laboratory period.

**300. Technical Skills in Soil Science.** (3) Students completing two successful Summers of work with the Soil Conservation Service are entitled to a total of 3 quarter hours credit to be counted toward the completion of the junior year requirement. Students completing one summer qualify for one quarter hour credit.

**311. Elementary Soil Classification.** (4) An introductory study of the principles of soil classification and land judging. Required of majors in Agronomy. Prerequisites: Soils 202-3. Three lectures and one laboratory period.

**401. Soil and Water Conservation and Management.** (4) A study of the principles of tillage, drainage, fertilization and rotation practices as they affect the productive capacity of field soils. Three lectures and one laboratory period.

**402. Advanced Soil Fertility.** (4) A study dealing with the determination of nutrient deficiencies in soils and plants by rapid methods, and recommendations of corrective measures. Prerequisites: Soil Fertility 203, Chemistry 361, Biochemistry 312. Two lectures and two laboratory periods.

**411-12-13. Seminar.** (3) Includes the discussion of current topics, lectures and demonstrations in Agronomy and related areas.

**450. Senior Project.** (3) Required of all Agronomy majors.

### **Crop Science**

**102. Plant Sciences.** (3) A one quarter, introductory course in Plant Science that exposes students to the principles of crop science, horticulture, and conservation of the renewable natural resources. Two lectures and one laboratory period per week.

**201. Field Crops.** (3) A study of the different uses of land, crop characteristics, adaptation, culture and use. Two lectures and one laboratory period.

**213. General Agricultural Botany.** (4) Designed to provide a broad understanding of the fundamental facts and principles of botanical sciences. Three lectures and one laboratory period.

**301. Sorghums and Small Grains.** (3) Deals with the distribution, culture and use of the cereal grains and their climatic adaptation. Two lectures and one laboratory period.

**302. Cotton and Tobacco.** (3) A study of the principles of cotton and tobacco culture, fertilizing, producing, grading, classifying and marketing. Two lectures and one laboratory period.

**303. Plant Physiology.** (3) Application of Plant Physiological principles to seed plants with special emphasis on photosynthesis respiration absorption, transpiration and nutrition. Two lectures and one laboratory period.

**321. Farm Weeds and Their Control.** (3) A one-quarter course of work on the identification, eradication, and economic value of the important weeds of fields and pastures. Elective for any department. Two lectures and one laboratory period.

**322. Plant Pathology.** (3) A study of the diseases of the most important agricultural plants of Tennessee and the South. Emphasis on the nature of the disease, recognition and control measures. Two lectures and one laboratory period.

**323. Economic Entomology.** (3) Provides a brief review of the structure, morphology, controls and the recognition of economic insects as related to agriculture. One lecture and two laboratory periods.

**403. Legumes and Pastures.** (3) Provides information on the important legumes. Adapted to the climate of Tennessee, and characterizes the Forage and Pasture Programs of Tennessee. Two lectures and one laboratory period.

## **HORTICULTURE**

**201. Principles of Fruit Growing.** (3) A study of the principles and practices involved in the culture and orchard plants. Two lectures and one laboratory period.

**202. Ornamental Horticulture.** (3) An elementary course of principles and practices involved in the production of flowers and ornamental plants. Two lectures and one laboratory period.

**203. Vegetable Gardening.** (3) A basic study of the principles and practices of vegetable production. Two lectures and one laboratory period.

**\*\*302-3. Commercial Vegetable Production.** (6) Deals with the principles and practices of commercial vegetable production and study of varieties, cultural practices, insect and disease control, grading, packing, storing and marketing. Two lectures and one laboratory period.

**331-2-3. Technical Skills in Horticulture.** (9) Aims to develop technical skills necessary for production of fruits, vegetables and ornamental plants. Required of all students majoring and/or minoring in horticulture. Three laboratory periods.

**343. Propagation of Horticultural Plants.** (3) A study of the methods of propagation of horticultural plants including seedage, cuttage and grafting of both economic and ornamental plants. Two lectures and one laboratory period.

**\*352. Floriculture.** (3) A course dealing with the principles underlying culture of greenhouse crops, commercial cut flowers and house plants.

**363. Forestry.** (3) A study of forest conservation and management and the relation of forestry to agriculture, including the influence of the forest on climate, streamflow and erosion. Two lectures and one laboratory period.

**372. Landscape Plants and Design.** (3) A study of landscape composition dealing with the designing of small lots, city property, public grounds and large estates. The use of ornamental plants such as trees, shrubs and flowers and their identification.

**\*\*401. Handling, Storage and Utilization of Fruits and Vegetables.** (3) The important factors in harvesting and handling fruits and vegetables that affect quality and marketability. Two lectures and one laboratory period.

**\*402. Orchard and Small Fruit Culture.** (3) Deals with the study and practices in propagating, planting, pruning, cultivating, fertilizing, spraying, and thinning orchard and small fruit crops. Two lectures and one laboratory period.

**\*\*403. Growth and Development of Fruits and Vegetables.** (3) Deals with the factors affecting growth, development and quality of fruits and vegetables.

**\*\*423. Types and Varieties of Fruits and Vegetables.** (3) Deals with the taxonomy, origin, history, characteristics, adaptation, identification, classification, exhibition and judging of kinds and varieties of fruits and vegetables. The value of the course depends to a great extent upon gaining an acquaintance with the plant material as it grows. Two lectures and one laboratory period.

**450. Senior Project.** (3) Individual student research and presentation of a special topic or problems selected by the student and approved by the adviser. Prerequisite: Senior standing.

**451. Floral Design.** (3) A course dealing with the essentials of flower arrangement. One lecture and two laboratory periods.

\*Courses offered in odd years only.

\*\*Courses offered in even years only.



**453. Turf Management.** (3) This course will deal with establishing lawns, soil preparation, seeding, watering, fertilization, clipping, and general management. Corrective measures in established lawns, Care of Golf Course Greens.

## **CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS**

**101. Principles and Concepts of Child Development.** (3) A study of the basic principles and concepts of growth and development which serve as a foundation in understanding children.

**321. The Child's Play Environment.** (3) A study of the role of play in the young child's development. Emphasis placed on the selection, care, use, and presentation of play materials and equipment for young children. Students are able to plan activities and to construct toys. One lecture and two laboratory periods.

**322. Courtship and Marriage.** (3) A study of dating, courtship and engagement — problems evolved before marriage and their effect on the ultimate success or failure in or out of marriage. Three lectures.

**332. Creative Arts for Young Children.** (3) An interpretation and involvement with (1) art learning activities, (2) self-directed activities and (3) integrated activities with emphasis on The Role of Creative and Play Materials for the young child. Related activities and experiences with various old and new materials, and correlation of contemporary trends in Art Education. Observation and Participation in The Nursery School or Kindergarten.

**351. The Young Child and His Family.** (3) Emphasis placed upon development and behavior from conception through adolescence. Consideration of family interaction which is basic to the formation of attitudes and behavior. Observation of developmental and behavioral differences and methods of working with children. Two lectures and two laboratory periods.

**352. Nursery School Observation.** (1) Observation in Nursery school along with Course 351. Required of majors only.

**353. Early Periods of Development — Infancy and Babyhood.** (3) Emphasis is placed on factors affecting prenatal development. Includes a study of the physical, intellectual, emotional and social needs as well as variables affecting development from birth to 2 years of age. Two lectures and one laboratory which includes observation and participation. Prerequisites: CDFR 101 or special permission from the instructor.

**371. Methods and Techniques in Teaching Family Relationships.** (3) Concerned with methods and techniques of teaching family-social relationships. Attention is given to new materials and equipment currently being used by the Federal government in various programs concerned with family life. Three lectures.

**450. Senior Project Writing.** A requirement of the University to be taken by every major in the department.

**452. Child Practicum.** (3) (Middle Periods) — Observation and participation in the directing and guiding of young children in preschools, in the home, and in other situations. Prerequisites: Majors of Option I — CDFR 101-353; Majors of Option II — CDFR 101-251; Home Ec. Majors — CDFR 251 along with Nursery School Observation 352.

**460. Nursery School and Kindergarten Methods.** (3) Includes methods, materials and modern trends in teaching in the nursery school and kindergarten. Organization, equipment and housing are studied in relation to the development of children at these levels.

**461. Advanced Child Development.** (3) A study of development of the young child in different socio-economic levels with emphasis on conceptualization, interpretation of growth norms, and adult-child interaction. Prerequisite: Psy 242.

**462. Honors Child Development and Family Relationships.** (3) An intensive investigation of a special area in Child Development or Family Relationships. Opened to advanced juniors and seniors showing special ability in CDFR.

**463. Family Relationships.** (3) Problems in family life. A study of modern family life, giving special emphasis to the activities of the home as they relate to the development of the family and its individual members. Three lectures.

**\*464. Later Periods of Childhood.** (3) A study of the development of the child from later pre-school age to adolescence (5-12 years). Open to men and women of all schools. Prerequisite: CDFR 351.

**\*465. Survey of Development Throughout Adulthood.** (3) A study of the physical, psychological, and social development from early adulthood through maturity and old age. Includes characteristic adjustment problems in these periods of life. Prerequisites: 3 credits in CDFR, psychology, or sociology.

**466. Internship or Fieldwork in Child Development.** (3-6) Opportunity is given students to do practice work in nursery schools in the community and other agencies caring for children as well as the campus practice laboratory. Taken with approval of the coordinator of CDFR.

## CLOTHING AND TEXTILES

**111. Textiles.** (3) A practical consumer study of fabrics used for clothing and house furnishings including selection, use, and care.

**112. Clothing Selection.** (3) Planned to help the freshman student meet her clothing problems. Emphasis placed on personal grooming, selection of appropriate clothing, clothing costs, commodity study of articles included in the wardrobe, and care of clothing. Open to all students. One lecture and two laboratory periods.

**113. Children's Clothing.** (3) A study of the physiological, psychological and aesthetic aspects of children's clothing. Selection, construction and care of clothing for infants and small children are chief phases. Prerequisite: Clothing 112. One lecture and two laboratory periods.

**211. Elementary Clothing Construction.** (3) Principles of clothing construction are applied to cotton, linen and synthetic fabrics. Use and care of sewing machines, sewing skills, and wardrobe inventory included. Open to all students. One lecture and two laboratory periods.

**212. Intermediate Clothing Construction.** (3) Principles of clothing construction are applied to synthetic and blended fabrics. Use of commercial patterns, principles of fitting and the use and care of sewing machines included. Prerequisites: Clothing 112. One lecture and two laboratory periods.

**301. History of Costume.** (3) The history of costume from ancient times to the present and the influence of social and economic conditions upon costume. Open to all students. Two lectures and one laboratory.

**302. Clothing of the Family.** (3) Based on the needs of the students interested in child development, family relationships, teaching or social work. The study of family clothing problems from the standpoint of income, occupation, and health as well as aesthetic and psychological factors. Construction is included. Open to all students. Two lectures and one laboratory.

**312. Applied Dress Design.** (3) Features the application of decorative design in clothing construction, pattern adaptation, and originality. Prerequisite: Related Art 203. Two lectures and one laboratory.

**313. Renovation.** (3) Includes restyling, reconstruction, reclaiming, and repairing outmoded and discarded clothing and accessories. Open to all students. One lecture and two laboratory periods.

**320. Needle Craft.** (3) A study of the fundamental techniques of knitting, crocheting, embroidery and lacemaking. Open to all students. One lecture and two laboratory periods.

**321. Advanced Clothing.** (3) Deals with advanced construction methods. Emphasis placed on selection, construction and care of woolen garments. Prerequisite: Examination in construction skills. Juniors and seniors only. Two lectures and one laboratory.

**322. Flat Pattern Adaptation.** (3) A study of the principles and techniques of flat pattern design with application of these principles to commercial pattern alteration. The development of original designs emphasized. One lecture and two laboratory periods.

**401. Problems in Clothing and Textiles.** (3) Special problems in the details of clothing construction, selection and textiles selected and solved by the students. Also problems met in student teaching reviewed. Newer trends in clothing construction emphasized. Prerequisites: Clothing 211, 212. Two lectures and one laboratory.

**\*413. Dress Design and Draping.** A course in dress design with emphasis on originality and draping. Opportunity given to investigate sources of design and to practice various methods of designing. Prerequisite: Clothing 321. One lecture and two laboratory periods.

**450. Senior Project Writing.** (3) (With or without credit.)

## FAMILY ECONOMICS AND HOME MANAGEMENT

**300. Decision-Making.** (3) Designed to develop decision-making skills needed to manage effectively in today's society. Deals with the study of selected theories and research in decision-making, with special emphasis on how decisions are made. Three lectures.

**320. Household Equipment.** (3) Deals with the various types of household equipment, standard brands, their selection and care, and the study of problems concerned with the manufacture, marketing and servicing of the equipment of the home. Two lectures and one laboratory period. Prerequisite: H. Mgt. 321.

**321. Management Theory.** (3) A study of the management process and how it can be applied to utilize most effectively the resources of the family. Attention is given to human and material resources.

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**322. Economics for the Family.** (3) Principles and problems associated with production, exchange and use of wealth and their direct relation to the welfare of families. Three lectures.

**401. Management for the Low-Income Family.** (3) Deals specifically with problems of families with very low-incomes and those receiving welfare checks; how to get the most value from food stamps and free commodities. Field trips are arranged where actual conditions can be studied. Three lectures.

**422. Home Management Residence.** (4) Designed to integrate the homemaking knowledge and abilities and to develop awareness and some understanding of the components which make up the whole of management — such as goal defining, resource allocation and decision making. For senior Home Economics majors. Six weeks residence experience in Home Management House. Board and maintenance charged at the regular rates. Prerequisite H. Mgt. 321.

**424. Management Problems In Homes.** (3) Students observe actual homes and work with a homemaker on a Management problem. Prerequisite Home Management 321.

**\*433. Consumer Education.** (3) Includes a study of problems on market practices, the consumer and the market, methods of buying commodities and legislation governing labeling and branding. Three lectures. Prerequisite: H. Mgt. 321.

## **FOODS AND NUTRITION**

### **Foods**

**111-12. Food Buying and Preparation.** (6) The study of foods, including standards for selecting, purchasing, preparing and serving foods for high nutritive value and analyses of simple principles involved in food cookery. One lecture and two laboratory periods. To be taken in sequence.

**223. Meal Management.** (3) The planning, preparation and service of nutritious, attractive meals, with emphasis on the conservation of time, energy and money. One lecture and two laboratory periods.

**311. Science Related to Cookery.** (3) A study of the principles underlying the theoretical and practical aspects of food preparation. One lecture and two laboratory periods.

**312. Experimental Cookery.** (3) Designed to offer opportunity for independent laboratory work in the solving of practical problems in food preparation, a study of methods of scoring and standardizing experimental work. One lecture and two laboratory periods.

**313. Institution Equipment.** (3) Includes study of the kinds, selection, care, cost and maintenance of individual pieces of equipment and their use and labor-saving devices in food service organizations.

**321. Food Preservation.** (3) A study of conventional and new methods of food preservation. Some laboratory work is done in freezing, and canning of foods. Two lectures and one laboratory period. Prerequisites: Foods 111-112.

**352. Food Demonstration.** (3) A study of the principles and techniques involved in foods, nutrition and equipment as applied to the needs of extension, business, classroom and community teaching. One lecture and two laboratory periods.

**412. Quantity Cookery.** (3) Deals with the problems of lunchrooms, cafeterias and tearooms for the general public, institutions and schools. Attention is given to methods of purchasing foods in quantity, organization of labor, standards of work materials, equipment and installation, meal planning and preparation in large quantities. One lecture and two three-hour laboratory periods.

**431. School Lunch.** (3) A study of the purpose and functions of the school lunch program, its operation and the judicial rules and regulations governing the administering of the program.

**452. Organization and Management.** (3) Includes a study of institutional food departments, professional ethics and qualifications for managers, employment procedures, personnel schedules and financial records. It also includes menu analyses, the development of standardized recipes, schedules and standardized work procedures.

### **Nutrition**

**211. Elementary Nutrition.** (3) Includes the fundamentals of nutrition for health, a study of the essentials of an adequate diet, the food needs of persons of different ages and occupations and the nutritive values of common foods, with special emphasis on the relation of health to such knowledge.

**212. Nutrition for Elementary and Secondary Teachers.** (3) A general course in nutrition and

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\* Approved for Graduate Credit



its relation to good health. The principles of nutrition in terms of the essentials of a well-balanced diet for different age groups and their use by the body are emphasized. Open to majors in other fields requiring instruction in the fundamentals of nutrition.

**311. Applied Dietetics.** (3) The fundamental principles of human nutrition as related to the construction of practical dietaries and in the application of these principles to the feeding of individuals, families and groups.

**411. Advanced Nutrition.** (3) A critical study of chemical and physiological factors in metabolism during prenatal life, infancy, childhood and normal adult life. Reports of recent research and their relation to problems of human nutrition. Prerequisites: Nutrition 211, Biochemistry 313.

**\*433. Child Nutrition.** (3) The study of the development of a health program for children as related to nutritive requirements and the planning of adequate dietaries. Prerequisite: Nutrition 211.

**450. Project Writing in Foods and Nutrition.** (3) Instructs the student in techniques of professional writing, literature searching and abstracting scientific material designed to assist each senior project. To be taken in the first quarter of the senior year.

**\*453. Diet Therapy.** (3) Designed to study the modifications of the normal diet in the treatment of disease. Prerequisite: Nutrition 311. Two lectures and one laboratory period.

## HOME ECONOMICS EDUCATION

**101-2. Orientation.** (3) A course required of all freshmen registered in the Department of Home Economics. Designed to orient the student into the field of home economics and to the life of the University, to give an appreciation of home economics as both a general and a professional education field, and to acquaint him with opportunities for study and employment in the various areas within the field of home economics. One lecture. One lecture fall quarter; two lectures, winter quarter.

**201. Guidance.** (3) A guidance course required of all transfer students entering above the freshman year and of all others who have not taken 101. The course is designed to acquaint students with professional opportunities, courses and requirements in the various fields of Home Economics. Three lectures.

**343. Occupational Training Programs in Home Economics.** (3) A study of the background, development and purposes of occupational training and work experience programs in home economics. Emphasis is placed on federal acts and laws, interpretations, procedures and curriculum implications. Existing programs will be surveyed and studied with implications for projection. Course will include field trips, laboratory experiences, special projects and resource speakers.

**371A. Methods of Teaching Home Economics.** (3) Emphasis is placed on the organization and administration of the entire school and the place of home economics within the school organization, the vocational homemaking program, the Federal Vocational Acts and introduction to the teaching of home economics in all-day, part-time and adult classes. This course should be scheduled within three quarters preceding the quarter in which student teaching is scheduled. Three lectures.

**371B. Materials and Teaching Aids.** (3) Opportunity is provided for experimentation and operation of different types of teaching aids and procedures. Attention is given to the use of films, recordings, tackboards, radio and television. Consideration is also given to the place of demonstration, discussion, field trips, home experiences and club work in the teaching of home economics. Prerequisite: 371A. Three lectures.

**372. Special Problems in Home Economics Education.** (3) A critical analysis of personal and academic problems related to teacher preparation will be undertaken. Course is designed for individual and group projects focused on recent research findings and general depth in subject matter. Prerequisite: Home Economics Education 371A.

**373. Home-School-Community Programs in Vocational Home Economics.** (3) Course is based on interpretations and requirements of federal, state, and local regulations in relation to vocational home economics. Topics include the home experience program, extension service, home visitation, family counseling, leadership in Future Homemakers of America and American Home Economics Association organizations. Opportunities are provided for participation in field trips, demonstrations, individual and community projects.

**450. Senior Project Writing.** (3) Designed to give students opportunity to select and develop problems of their choice in the area of home economics. A requirement for graduation.

**460. International Travel.** (3) Study tour of European cultural centers, museums, and historic sites designed to develop an appreciation of the historical and cultural contributions of these

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countries. Visits include: England, France, Holland, Germany, Austria, Italy, Switzerland, Spain and Portugal.

**461. Educational Leadership in Adult Education.** (3) Philosophy organization and administration of home economics programs for adults and out-of-school youths. Interests and needs of various age and social groups will be studied in relation to methods and materials effective in group work. Findings of latest research and educational media such as radio and television will be emphasized.

**463. Seminar in Home Economics.** (3) Explanation and implications of recent research studies and selected topics in home economics provide the focal points of the course. It is designed for interdepartmental exchange of ideas and includes activities in individual and group research, special readings, discussions, formal writing and seminar reporting.

**471. Problems of Curriculum and Teaching.** (3) A study of practical methods of organizing the curriculum and adapting its contents to pupil and community needs. Consideration is given to the part the curriculum plays in vitalizing the community and to the underlying principles involved. Three lectures.

**472. Observation and Student Teaching in Home Economics.** (12) Supervised observation and teaching in the public schools of Tennessee is provided. Problems of organization and supervision basic to induction of teachers into their profession will be stressed. Supervised teaching is done in off-campus teaching centers for a minimum of 12 weeks. Room and board while in the center will be paid by students. Prerequisites: 371A, 371B.

#### RELATED ART

**201. Color and Design.** (3) Good taste as it applies in personal grooming. Problems of color and design as related to the person with the home as a background, i.e., the study of art principles and certain accepted rules governing their application to personal grooming with regard to size, complexion, personality, function, occasion and other areas of importance.

**203. Costume Design.** (3) Study of historic costumes as a background and inspiration for modern costume. Does not emphasize original designing and drafting although individual ideas in keeping with good taste encouraged. Emphasis placed on the application of design principles to garment selection with reference to the figure: size, form, age, good points, points not so good, function, occasion. Problems of dress of the average wage or below-average wage consumer with suggestions for ways to be well dressed on a limited budget. Prerequisite: Related Art 201.

**\*323. Spatial Living I—Introduction to Home Furnishings and Interior Decoration.** (3) Planned to stimulate awareness and appreciation for the well-designed home and its furnishings as a background for living; experiences in creating objects for home and personal use.

**400. Spatial Living II—General Home Furnishings and Interior Decoration.** (3) A general course in home furnishings and decorating designed to give basic principles and show how to use these principles in achieving results that are functional, beautiful, individual and personally satisfying. It provides opportunities for understanding the influences which housing has on the emotional and social development of family members and family life. The subject matter and laboratory activities are presented in the natural sequence for decorating a home, starting with color and continuing with furniture, fabric, accessories and arrangement.

**\*411. Art Crafts.** (3) A course for Social Administration majors; designed to present basic principles of various crafts to help prepare students for group leadership in the various aspects of social work. Open to all areas. One lecture and two laboratory periods.

**421. House Planning.** (3) Brief study of American contribution to domestic architecture and interior decoration fixtures: panels, stairways, cornices, cabinets. Planning the small house for comfort and convenience. Application for aesthetic qualities in home planning through the understanding of art principles and how to apply them; and fundamentals of blue print reading.

#### NON-DEPARTMENTAL OFFERINGS

**111. Agriculture Orientation.** (3) An orientation course required of all freshmen enrolled in agriculture. Method of study, advisement system, organization of curriculum, discussion of requirements, and career opportunities in various fields of agriculture are considered.

**201. Introduction to Social Sciences for Agriculture.** (3) Social Sciences as they relate to agriculture in the economy; tools of social science analyzed as they apply to agricultural problems; agriculture — its development, relation to man, industry and government.

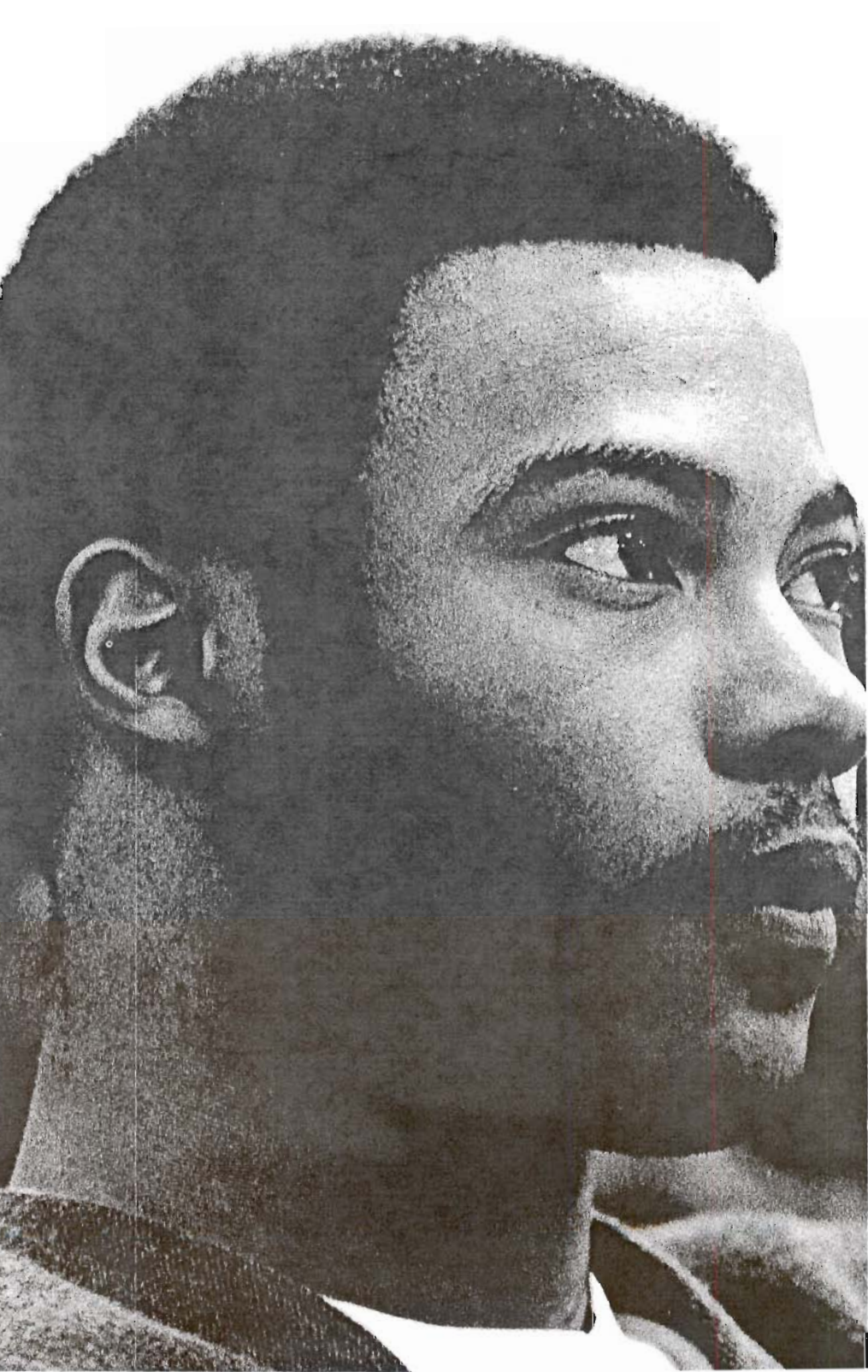
**203. Rural Sociology.** (3) This course deals with the pattern and changes in living, the family, the church, the community, the school and socio-economic problems of rural people.

\* Approved for Graduate Credit

# SCHOOL OF ARTS AND SCIENCES







## **SCHOOL OF ARTS AND SCIENCES**

**THOMAS E. POAG, Ph.D., Dean**

### **Purpose**

The general purpose of the School of Arts and Sciences is twofold: liberal and technical. The courses which make up its curriculum are offered in the areas of Humanities, Natural Sciences and Social Sciences.

Because of the breadth and fundamental nature of its curriculum and the necessity to acquire a reasonable mastery of a single field of concentration, the School of Arts and Sciences provides a basic undergraduate education for those students planning (1) to enter the professions, (2) to continue in graduate study, or (3) to engage, upon graduation, in the gainful occupations of American life.

Through the School of Arts and Sciences, the University grants the Bachelor of Arts and Bachelor of Science degrees. The requirements for these degrees are satisfied normally in four years.

### **Types of Undergraduate Programs**

Two types of undergraduate programs are offered in the School of Arts and Sciences, each leading to the Bachelor's degree. One program attempts to prepare the student for the teaching profession; the second program, for professions other than teaching.

In the teacher education program, the student selects a major field of concentration within the School of Arts and Sciences. The student then fulfills course requirements in the general curriculum pattern of: (1) general education core (60-66 quarter hours), (2) professional education core (39 quarter hours), (3) certification endorsement area (quarter hours vary) and, (4) electives (quarter hours vary). Upon successful completion of this program, the student should qualify for a secondary school teaching certificate in the State of Tennessee. The departments offering teacher certification curriculums are: Biology, Mathematics, Modern Foreign Languages, History and Political Science, English, and Speech and Drama.

Several departments offer training for professions other than teaching. The purpose of these departments is to train students for successful performance as specialists in somewhat restricted fields of specialization.

### **General Requirements for a Bachelor's Degree**

Any candidate for a Bachelor's degree must complete a minimum of 198 quarter hours (with a minimum average of "C") which include:

The General Education or Liberal Education courses (57 to 63 quarter hours)

A minimum of 72 quarter hours in 300 and 400 level courses

A minimum of 36 quarter hours in a subject or major field with a minimum of 15 quarter hours in 300 and 400 level courses

A minimum of 6 quarters of required physical education courses

Nine quarter hours of English

Nine quarter hours of American history and government

A major program of studies within a department of the School

The senior year, or its equivalent (the last 48 quarter hours offered for the degree and the last nine months) in residence

The sophomore English Examination

A senior project

## Requirements for the Bachelor of Science Degree

### (Teacher Education Program)

To qualify for the Bachelor of Science degree with teaching certification, the student should complete the general requirements for a Bachelor's degree and other courses included in the following program:

1. General Education Core ..... 63 qr. hrs.
  - Communication (English 101, 102, 103) ..... 9 qr. hrs.
  - Health, Physical Education, Personal Development,  
and Home and Family Living ..... 9 qr. hrs.
  - Humanities ..... 15 qr. hrs.
    - Literature (9 quarter hours)
    - Two courses selected from  
Philosophy 323 or 301,  
Music 131 and Art 133
  - Modern Foreign Language at or above 200-level
- Natural Science ..... 12 qr. hrs.
  - Biology 101, 102, 103; Chemistry 111, 112, 113;  
Natural Science 121, 122, 123; or  
Physics 211, 212, 213
- Social Science ..... 12 qr. hrs.
- Mathematics ..... 6 qr. hrs.
2. Professional Education Core ..... 42 qr. hrs.
3. Area of Endorsement ..... 36-54 qr. hrs.
4. Other quarter hours to total the number  
required by the University and the major department.

## Requirements for the Bachelor of Science Degree

### (Without Teacher Education)

To qualify for the Bachelor of Science degree without teacher education, the student should complete the general requirements for a Bachelor's degree and other courses included in the following program:

1. Liberal Arts Core ..... 57 qr. hrs.
  - Communication ..... 9 qr. hrs.
    - English 101, 102, 103
  - Humanities ..... 15 qr. hrs.
    - World Literature (English 211, 212, 213) and  
Two courses from Philosophy 323, Music 131,  
Art 133, Drama, and Modern Foreign Language  
above 100 level
  - Social Science ..... 12 qr. hrs.
    - Selected from History, Sociology, Political  
Science, Geography, and Economics
  - Science ..... 12 qr. hrs.
    - Selected from any one of the following courses:  
Biology 101, 102, 103;  
Chemistry 111, 112, 113;  
Physics 211, 212, 213 or 221, 222, 223; or  
Natural Science 121, 122, 123.
  - Mathematics ..... 9 qr. hrs.
    - Selected from any three-quarter course in  
Mathematics, taken in sequence
2. Major Field Courses ..... Minimum 36 qr. hrs.
3. Courses Related to the Major Field ..... Courses and quarter hours,  
adjusted by major department
4. Electives ..... Courses and quarter hours,  
adjusted by major department



## Requirements for the Bachelor of Arts Degree

To qualify for the Bachelor of Arts degree, the student should (1) complete the general requirements for a Bachelor's degree and other courses in the Liberal Education Core.

English 101, 102, 103 .....	9 qr. hrs.
World Literature 211, 212, 213 .....	9 qr. hrs.
Foreign Language (12-30 hours) .....	21 qr. hrs.
(See Foreign Language requirement below)	
Social Science .....	12 qr. hrs.
Natural Science .....	12 qr. hrs.
Mathematics .....	9 qr. hrs.
Philosophy, Music, Art, Drama (Combination of any two courses) .....	6 qr. hrs.

## Modern Language Requirements for the Bachelor of Arts Degree

The foreign language (French, German, or Spanish) requirement may be satisfied as follows:

- Students who present no (0) units of a foreign language in high school when they enter the University are to take thirty (30) quarter hours of work in a foreign language, beginning with the freshman course in that language.
- Students who present two (2) units of a foreign language in high school and who desire to continue work in that same language may satisfy the language requirement by pursuing eighteen (18) quarter hours in that language, beginning with the sophomore course of that language.
- Students who present four (4) units of a foreign language in high school and who desire to continue work in that language may satisfy the language requirement by pursuing nine (9) quarter hours in that language, beginning with the junior course.

## Proficiency Test in French, German, Spanish

Students who enter the University for the first time and who present two or more high school units in a foreign language may take a proficiency test in that language. A student's proficiency in a given language may alter the number of quarter hours required to satisfy the language requirement.

## PROVISION FOR PROFESSIONAL TRAINING IN MEDICINE, DENTISTRY, AND LABORATORY TECHNOLOGY

For description of program, see Department of Biological Sciences.

## COMBINATION CURRICULA FOR THE STUDY OF MEDICINE AND DENTISTRY

For description of program, see Department of Biological Sciences.

## ARTS AND SCIENCES COURSES REQUIRED IN ALL DEPARTMENTS

101. Freshman Orientation. (1) This course covers the four broad areas of Freshman Orientation. Introduction to College; Academic Adjustment; Educational and Vocational Planning; and Personal Adjustment. The concluding part of the course encourages the undergraduate to examine the values he lives by and to recognize their importance to his success not only in College but throughout life. Required of all freshmen.

## DEPARTMENT OF BIOLOGICAL SCIENCES

H. K. WOOD, Ph.D., Head

The curricula of the Department of Biological Sciences are designed to fulfill the requirements in the areas of (1) teacher education, (2) preprofessional training for the medical branches, including health and sanitation and basic biological sciences, (3) graduate training of in-service teachers and professionals and (4) service courses for other departments of the University.

Three major undergraduate curricula are offered, each of which terminates in the Bachelor of Science degree. The first two years of all three curricula consist of a basic curriculum of the Lower Division encompassing the principles of the biological sciences. Upon entering, students desiring the Teacher Education Curriculum should select the Basic Curriculum of Teacher Education. Those desiring the professional curricula should select the Basic Curriculum of the Professional Programs. The student must maintain a minimum point average of 2.25 (based on the 4-point system) in his major and must pass a departmental sophomore comprehensive examination

over biological principles to be taken during the third quarter of the sophomore year.

Upon successful completion of the curriculum of the Lower Division, viz. a minimum major point average of 2.25 and passing the departmental sophomore comprehensive test, the student is to select his specific major curriculum of the Upper Division under the guidance of his major advisor at the beginning of the first quarter thereafter which is usually the first quarter of the junior year. The student is expected to maintain a minimum point average of 2.25 in the Major of the Upper Division. Those students following the Teacher Education Biology Major must also maintain a point average of 2.25 in their teaching fields. The University requires all students to take the University Sophomore tests the third quarter of the sophomore year which must be passed with a satisfactory score prior to graduation.

The students who wish to prepare for entrance into one of the medical professions should select one of the Professional Curricula. Students desiring to prepare themselves for teaching of general science, biology, and chemistry should select the Biology Curriculum of Teacher Education. Endorsement in any one of these fields is contingent to a minimum point average of 2.25. No grade less than "C" in any major course will be accepted as credit toward meeting departmental requirements (lower and upper divisions).

Each of the three curricula requires a minimum of 198 quarter hours for graduation, 66 of which must be on the 300 and 400-levels. Each curriculum, also, requires a minimum of 56 quarter hours of major courses as described below in the curriculum, 15 of which must be on the 300 and 400-level and 18 quarter hours of German or French or equivalent.

A student may qualify for the Bachelor of Arts degree by completing the equivalent of 27 quarter hours of German or French in addition to the regularly prescribed courses.

Seniors of outstanding attainment who have demonstrated high achievement in their major are encouraged to take Biology 452, a junior honors research program. This course offers opportunity to gain experience in research under the direction of the Departmental Faculty.

An undergraduate minor in the Department consists of a minimum of 42 quarter hours, 34 of which should be taken in sequence in Biology 111-12-13, Bacteriology 240, Botany 112-13 and Biology 311. General Chemistry 111-12-13 is required as a supporting related course and must precede Bacteriology 240. The remaining 8 hours of the minor must be on the 300 and/or 400-level and may be elected in the minor area desired by the student. For a Biology Minor, 4 hours should be in a botany or microbiology course and 4 hours in a zoology course. For a Botany-Microbiology Minor, 4 hours should be in microbiology. For a Zoology Minor, the 8 hours of electives should be in zoology. Any student desiring to be endorsed to teach biology must have the Biology Minor equivalent of 42 hours plus one year of general chemistry.

Minors in the Department must maintain a point average of 2.25. No grade less than "C" in the minor will count toward meeting minor requirements of the Department of Biological Sciences.

## LOWER DIVISION

### BASIC CURRICULUM FOR TEACHER EDUCATION

With a Major in Biology

Freshman Year				Sophomore Year			
Name of Course	I	II	III	Name of Course	I	II	III
Bio. 111-12-13	5	5	5	Microbio 240	5		
Math. 161-2		5	5	Bot. 112-3		5	5
Orient. 101	1			Chem. 111-2-3	4	4	4
P. E. 11-12-13 or				English 211-2-3	3	3	3
AS 151-2-3	1	1	1	Ed. 201	3		
English 101-2-3	3	3	3	Psych. 242-3		3	3
Hist. 201-2-3 (any two)	3	3		P. E. 21-42 or			
Pol. Sci. 221-2-3 (one)			3	Air Science 251-2-3	1	1	1
Music 131 or Art 133	3			*German or French 101-2-3 or			
				201-2-3	4	4	4
				Biology 251			0
	16	17	17		20	20	20

\* A student who has two or more units of the foreign language in high school and passes the entrance proficiency test will begin the language at the level of this indicated proficiency. German is strongly recommended.

## BASIC CURRICULUM FOR PROFESSIONAL MAJOR

Freshman Year				Sophomore Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
Biology 111-2-3	I	II	III	Microbio. 240	I	II	III
Math. 161-2	5	5	5	Bot. 112-3	5	5	5
English 101-2-3	3	3	3	English 211-2-3	3	3	3
P. E. 11-12-13 or				Chem. 111-2-3	4	4	4
Air Science 151-2-3	1	1	1	*German or French			
Hist. 201-2-3 (any two)	3	3		101-2-3 (or 201-2-3)	4	4	4
Pol. Sci. 221-2-3 (one)	3		3	P. E. 21-42 (or			
Music 131 or Art 133	3			Air Science 251-2-3)	1	1	1
Orient. 101	1			Biology 251			0
	16	17	17		17	17	17

## UPPER DIVISION

### CURRICULUM FOR TEACHER EDUCATION

#### With a Major in Biology

This Major in Biology must be preceded by the Basic Curriculum for Teacher Education with a Major in Biology. The Upper Division of this Curriculum is to consist of approximately 50% of courses in Zoology and 50% of courses in Botany and Microbiology on the 300 and 400-level. A minimum of 2 hours of Biology Seminar is required during the senior year. All third quarter seniors must register for and pass satisfactorily Biology 451 to be taken in lieu of the Senior Project.

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
Biology 311	I	II	III	Zoo. 432	I	II	III
Biology, Botany, Microbio,	4			Biology 473	4		4
Zoo., Electives		4	4	Bot. 453 or 400 level			
Chem. 311	4			Biology Elective			4
Physics 211-2-3				Ed. 462, Psych. 463	3		3
(or 221-2-3)	4	4	4	Ed. 471-2S	15		
Ed. 301, Sci. Ed. 371		3	3	Chem. 312-3	4		4
*German or French 201-2-3				Biology 497-8-9 (two)	1		1
(or Electives)	3	3	3	Health or Nutrition	3		
Ed. 387, Phil. 301 or 323		3	3	Biology 451			0
	18	17	17	Pol. Sci., Hist., or			
				Econ., or Soc.	3		
					15	18	16

### CURRICULUM FOR PROFESSIONAL MAJOR IN BOTANY AND MICROBIOLOGY

The Major in Botany and Microbiology must be preceded by the Basic Curriculum for Professional Major. A minimum of 2 hours of Biology Seminar is required during the senior year. All third quarter seniors must register for and pass satisfactorily Biology 451 required in lieu of the Senior Project.

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
Biology 311	I	II	III	Bot. 411	I	II	III
Microbio. 312		4		Microbio.	4	4	
Botany 313			4	Biol. 411 or 441 or 473			
Physics 211-12-13	4	4	4	or Bot. 453 or			
Psychology 221-2		3	3	Microbio. 413 or 463			4
Soc. 322 or Hist.	3			Biology 451			0
German or French 201-2-3				Biology 497-8-9 (two)	1	1	1
(or Electives)	3	3	3	Electives	8	8	8
Phil. 301 or 323				Chem. 311-12-13	4	4	4
or Electives	3	3	3		17	17	17
	17	17	17				

\* A student who has two or more units of the foreign language in high school and passes the entrance proficiency test will begin the language at the level of his indicated proficiency. German is strongly recommended.



**CURRICULUM FOR PROFESSIONAL MAJOR IN ZOOLOGY**

The Major in Zoology must be preceded by the Basic Curriculum of the Professional Major. A minimum of 2 hours of Biology Seminar is required during the senior year. All third quarter seniors must register for and pass satisfactorily Biology 451 required in lieu of the Senior Project.

Junior Year Name of Course	Quarter Hours Credit			Senior Year Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Biology 311 .....	4			Zoology 432 .....		4	
Zoology 332-3 .....		4	4	Biology or Zoology Elective (400-level) .....	4		
Physics 211-2-3 .....	4	4	4	Biology 451 .....			0
Psychology 221-2 .....		3	3	Electives .....	8	8	8
Soc. 32 or Hist. ....	3			Biology 497-8-9 (two) .....	1	1	1
German or French 201-2-3 (or Electives) .....	3	3	3	Biology 473 .....			4
Phil. 301 or 323 or Electives .....	3	3	3	Chem. 311-12-13 .....	4	4	4
	17	17	17		17	17	17

**PROVISION FOR PROFESSIONAL TRAINING IN MEDICINE, DENTISTRY,  
AND MEDICAL TECHNOLOGY**

Through affiliations with Meharry Medical College and the Vanderbilt-VA School of Medical Technology, Tennessee State University has several curricula as joint programs with these Institutions which qualify students for the bachelor's degree. Successful completion of these joint programs is contingent to acceptance at the respective Institutions. However, a major in the biological sciences who successfully completes the four year program at Tennessee State University qualifies for entrance into a training program for medicine or dentistry or medical technology.

**COMBINATION CURRICULA FOR THE STUDY OF MEDICINE, AND DENTISTRY**

Curricula preparatory for the study of medicine and dentistry are offered at Tennessee State University in cooperation with Meharry Medical College. The curricula are point programs between the two institutions and qualify students for the bachelor's degree.

**BIOLOGY—MEDICAL COMBINATION CURRICULUM**

**Leading to the Bachelor's Degree with a Major in Biology**

The first part of this joint curriculum is offered regularly enrolled students at Tennessee State University who are pursuing a Bachelor of Arts or a Bachelor of Science curriculum with a major in the Biological Sciences.

The first two years of this curriculum consist of the Basic Curriculum for Professional Major in the Biology Lower Division. The third year consists of the Junior Year of either the curriculum for Professional Major in Zoology or the Curriculum for Professional Major in Botany and Microbiology of the Upper Division of Biological Sciences.

The first three years at Tennessee State University include courses designed (1) to offer adequate training in the basic sciences and (2) to promote broad cultural development. The student is expected to meet the standards of the University and the Department of Biological Sciences and to complete a minimum of 144 quarter hours with a minimum of 33 quarter hours on the 300 and 400 levels.

The fourth year of the joint curriculum is offered those students who are admitted to the Meharry Medical College. At the successful completion of the freshman year curriculum in the School of Medicine at the Meharry Medical College, the student makes application to the Tennessee State University for the Bachelor of Arts or Science degree. Upon joint recommendation of the Meharry School of Medicine and the Tennessee State University, the student becomes a candidate for the Bachelor of Arts or Science degree. The degree is awarded by the Tennessee State University.

Fourth Academic Year (9 months)

**FIRST YEAR MEDICAL CURRICULUM AT MEHARRY MEDICAL COLLEGE**

Course	Total Clock Hours	Equivalent Quarter Hours Credit
Biochemistry .....	237	12
Physiology .....	218	11
Anatomical Sciences .....	565	24
Introduction to Behavioral Medicine .....	99	8
<b>Total Hours .....</b>	<b>1119</b>	<b>55</b>

**BIOLOGY—DENTAL COMBINATION CURRICULUM****Leading to the Bachelor's Degree with a Major in Biology**

The first part of this joint curriculum is offered regularly enrolled students at Tennessee State University who are pursuing a Bachelor of Arts or Science curriculum with a major in the Biological Sciences.

The description of the first three years of this joint curriculum is the same as for the Biology-Medical combination curriculum (see above).

The fourth year of the joint curriculum is offered those students who are admitted to the Meharry School of Dentistry. At the successful completion of the freshman year curriculum in the School of Dentistry at the Meharry Medical College, the student makes application to the Tennessee State University for the Bachelor of Arts or Science degree. Upon joint recommendation of the Meharry School of Dentistry and the Tennessee State University, the student becomes a candidate for the Bachelor of Arts or Science degree. The degree is awarded by the Tennessee State University.

**Fourth Academic Year (9 months)****FIRST YEAR DENTAL CURRICULUM AT MEHARRY MEDICAL COLLEGE**

Course	Total Clock Hours	Equivalent Quarter Hours Credit
Orientation .....	12	0
Biochemistry .....	190	11
Physiology .....	171	9
Dental Anatomy .....	125	5
Correlated Oral Biology .....	56	3
Oral Histology and Embryology .....	51	3
Microbiology .....	88	5
Oral Physiology of Complete Dentures (CD) .....	10	1
Dental History .....	11	1
Anatomical Sciences .....	554	26
Introduction to Behavioral Medicine .....	9	1
Introduction to Preventive Dentistry .....	12	1
<b>Total Hours .....</b>	<b>1289</b>	<b>66</b>

## CURRICULUM IN MEDICAL TECHNOLOGY

### Leading to a Bachelor of Science Degree in Medical Technology and a Certificate in Medical Technology

Tennessee State University has affiliations with the Vanderbilt-Veterans Administration School of Medical Technology and the School of Medical Technology of Hubbard Hospital, Meharry Medical College for the purpose of participation in their medical technology programs. This curriculum consists of a three year designated program at Tennessee State University and the fourth year to consist of the 12 month medical technology program at either the Vanderbilt-V.A. School of Medical Technology or the School of Medical Technology of Hubbard Hospital, Meharry Medical College. Successful completion of the joint four year program results in a Bachelor of Science Degree in Medical Technology, to be granted by Tennessee State University, and a Certificate of Medical Technology to be granted by Vanderbilt-V.A. School of Medical Technology or the School of Medical Technology of Meharry Medical College contingent to acceptance in either one of these institutions. Approximately 80 quarter hours of credit, transferred from the medical Technology program, constitute the fourth year credit toward the Bachelor of Science Degree in Medical Technology with a major in Biology.

#### Fourth Calendar Year (52 Weeks)

##### MEDICAL TECHNOLOGY CURRICULUM AT THE SCHOOL OF MEDICAL TECHNOLOGY, MEHARRY MEDICAL CENTER

Course	Total Clock Hours	Equivalent Quarter Hours Credit
Hematology . . . . .	360	11
Immuno-Hematology . . . . .	224	8
Clinical Biochemistry . . . . .	528	21
Microbiology . . . . .	478	17
Serology . . . . .	140	5
Histology . . . . .	140	5
Pulmonary Functions . . . . .	54	2
Electro-Cardiography . . . . .	54	2
Miscellaneous Lectures . . . . .	40	3
Orientation . . . . .	40	0
Electrophoresis . . . . .	10	0
	<u>2068</u>	<u>74</u>

#### Fourth Calendar Year (52 Weeks)

##### MEDICAL TECHNOLOGY CURRICULUM AT VANDERBILT-VETERANS ADMINISTRATION SCHOOL OF MEDICAL TECHNOLOGY

Course	Total Clock Hours	Equivalent Quarter Hours Credit
Bacteriology . . . . .	330	12
Biochemistry . . . . .	350	13
Blood Bank . . . . .	170	6
Electrocardiography . . . . .	65	2
Hematology . . . . .	280	10
Histopathology . . . . .	175	6
Parasitology . . . . .	140	5
Radioisotopes . . . . .	70	3
Serology . . . . .	110	4
Urinalysis . . . . .	100	3
Total Hours . . . . .	<u>1790</u>	<u>64</u>



## DEPARTMENT OF CHEMISTRY

LONNIE HAYNES, Ph.D., Head

The curriculum of Department of Chemistry is designed (1) to offer a collegiate major in Chemistry which, qualitatively and quantitatively, satisfies the criteria generally adopted by the leading colleges and universities of the United States and by the American Chemical Society and (2) to offer meaningful and satisfactory service courses to other departments in the university. (3) To provide a curriculum for those students wishing to obtain a Tennessee Teachers certificate (undergraduate program for non-professional majors for prospective Teachers).

Students who are taking a professional undergraduate major in Chemistry must begin their work in the freshman year and should take the courses shown in the program below entitled "Undergraduate Program for Professional Major." A minimum of 66 quarter hours in 300 and 400-level courses is required of majors.

### Undergraduate Program for Professional Major

A professional undergraduate major consists of a minimum of 60 quarter hours of Chemistry, 36 of which must be in 300 and 400-level courses. These hours are accumulated through pursuing the following courses.

Chemistry	111-2-3 (General)	12 qt. hrs.
Chemistry	211-2-3 (Analytical)	12 qt. hrs.
Chemistry	311-2-3 (Organic)	12 qt. hrs.
Chemistry	401 (Chemical Bibliography)	3 qt. hrs.
Chemistry	481-2-3 (Physical)	12 qt. hrs.
Chemistry	400 (Senior Project)	3 qt. hrs.
Chemistry	491-2-3 (Seminar)	3 qt. hrs.
Chemistry:	Elective Advanced Course	6 qt. hrs.
Total Hours Chemistry		63 qt. hrs.

### For a minor in Chemistry (36 Quarter Hours)

Chemistry	111-2-3 (General)	12 qt. hrs.
Chemistry	211-2-3 (Analytical)	12 qt. hrs.
Chemistry	311-2-3 (Organic)	12 qt. hrs.
Total Hours Chemistry		36 qt. hrs.

In addition, the major in Chemistry includes the following related and required courses:

Mathematics	161-2-3	15 qt. hrs.
Mathematics	261-2-3	15 qt. hrs.
Physics	221-2-3	12 qt. hrs.
Social Science Electives		9 qt. hrs.
German (2 Years)		18 qt. hrs.
English Composition	101-2-3	9 qt. hrs.
English Literature	211-2-3	9 qt. hrs.
American History	202-3	6 qt. hrs.
American Government	233	3 qt. hrs.

Total Hours Related and Required Courses 96 qt. hrs.

A cooperative program is available to students in the professional undergraduate major in Chemistry. After the freshman year the student alternates a quarter in school with a quarter on a job in a chemical industry.

## CURRICULUM IN CHEMISTRY FOR A PROFESSIONAL MAJOR

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Chemistry 111-2-3	4	4	4	Chemistry 211-2-3	4	4	4
English 101-2-3	3	3	3	Foreign Lang. I (Ger.)	4	4	4
Mathematics 161-2-3	5	5	5	Mathematics 261-2-3	5	5	5
Physical Education 11-12-13				Physical Education			
or Air Science	1	1	1	20's and 50's or			
American History 202-3	3	3		Air Science	1	1	1
American Gov't 223			3	World Literature 211-2-3	3	3	3
Orientation	1						
	17	16	16		17	17	17

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Chemistry 311-2-3	4	4	4	Chemistry 481-2-3	4	4	4
Physics 221-2-3	4	4	4	Chemistry 401	3		
Foreign Lang. II (Ger.)	3	3	3	Chemistry Elective		3	3
Electives (Unrestricted)	3	3	3	Chemistry 400			
Social Science Elective	3	3	3	(Senior Project)		3	
				Social Science Elective	3	3	3
				Elective (Unrestricted)	6	3	3
				Chemistry 491-2-3	1	1	1
	17	17	17		17	17	17

## CURRICULUM IN CHEMISTRY WITH CERTIFICATION

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Chemistry 111-2-3	4	4	4	Chemistry 211-2-3	4	4	4
English 101-2-3	3	3	3	English 211-2-3	3	3	3
Mathematics 161-2-3	5	5	5	Education 201	3		
American History 202-3	3	3		Psychology 242-3		3	3
American Gov't 223			3	Foreign Lang. 101-2-3	4	4	4
Physical Education 11-12-13	1	1	1	Physical Education 20's-90's	1	1	1
	16	16	16	Sociology 211-2-3	3	3	3
					18	18	18

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Chemistry 311-2-3	4	4	4	Education 462	3		
Physics 221-2-3	4	4	4	Psychology 462	3		
Education 301-387	3	3		Chemistry 400-1	3	3	
Psychology 312			3	Education 473		3	
Sociology 322-3-332	3	3	3	Education 471-2			15
Science Education 371			3	Elective	6	9	
Foreign Lang. (Ger.) 201-2-3	3	3	3	Chemistry 491-2-3	1	1	1
	17	17	20		16	16	16

## Department of English

The program of the Department of English is so arranged as to serve the needs of all the students of the University, as well as to give a thorough foundation to those who desire to become teachers or specialists in the field. The Department also gives assistance to those who look forward to careers in the field of journalism.

Work leading to the Bachelor of Science degree, as well as to the Bachelor of Arts degree, may be pursued in the Department of English. All students working for an undergraduate degree in English must complete at least 12 quarter hours in either biology, chemistry, or natural science and at least 9 quarter hours in mathematics (Mathematics 111-112-113 or Mathematics 131-132-133) in addition to the other requirements. Candidates for the Bachelor of Arts degree must meet the requirements of the University in foreign languages, which requirements are stated elsewhere. (For a person who has had no foreign language in high school the foreign language requirement is 27 hours of work in one language for the Bachelor of Arts degree.) Candidates

for the Bachelor of Science degree may satisfy the requirements in foreign languages by completing only 9 quarter hours of work in one language, regardless of whether or not they had had foreign language in high school. All other requirements for the Bachelor of Science degree and the Bachelor of Arts degree in English are the same.

Each undergraduate must complete a minimum of 198 quarter hours of work for a bachelor's degree. At least 66 of the quarter hours in all subjects must be in courses on the 300 and 400 level. At least 54 quarter hours of work in English above the 9 quarter hours of work in Freshman English must be completed. (In actual practice, many more hours in English are completed by most English majors). This 54 quarter hour minimum requirement in English does not include the 3 quarter hour course in English 371 (Methods of Teaching English in High School), which carries certification credit in secondary education, although it is administered by the Department of English.

One desiring to take the teacher education program in English as a second teaching area must complete 36 quarter hours of work in English, including Freshman English (English 101-102-103, or its equivalent), Introduction to Literature (English 221), Survey of English Literature (English 222-223), History of the English Language (English 451), and World Literature (English 211-212-213). Methods of Teaching English (English 371) may not be included in this 36 hour total, though it must be completed.

Majors in English are required to complete the following courses:

English 101-102-103 (Freshman English); English 211-212-213 (World Literature); English 221 (Introduction to Literature); English 222-223 (English Literature); English 361-362-363 (American Literature); and English 451 (English Literature).

All English majors must elect a course in composition above the freshman level before graduation. In addition to the courses listed above, all English majors in the teacher education program must complete 42 quarter hours of approved work in professional education and, also, the following courses: Art 133 (Man and Materials); Music 131 (Music Appreciation); Social Studies 111-112-113-114; or three courses of one other social science and one course of another social science and three courses of mathematics, 111-112-113 or 131-132-133 or 161-162-163 and 9 quarter hours of work in Health, Personal Development, and Home and Family Living. All students must complete nine quarter hours of work in American History and Government.

## BACHELOR OF SCIENCE CURRICULUM IN ENGLISH

Freshman Year	Quarter Hours Credit		
	I	II	III
Name of Course			
English 101-2-3	3	3	3
Foreign Language	3	3	3
History 201-2-3	3	3	3
Mathematics	3	3	3
Health 211-12	3	3	3
Art 133			3
P. E. or AFROTC	1	1	1
Orientation	1		
	<hr/>	<hr/>	<hr/>
	17	16	16

Sophomore Year	Quarter Hours Credit		
	I	II	III
Name of Course			
English 211-12-13	3	3	3
English 221-2-3	3	3	3
Music 131	3		
Biology 101-2-3 or Chemistry 111-12-13 or Natural Science 121-22-23	4	4	4
Education 201	3		
Psychology 242		3	
American Government 221 or 222 or 223			3
P. E. or AFROTC	1	1	1
Electives		3	3
	<hr/>	<hr/>	<hr/>
	17	17	17

Junior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
English 361-2-3	3	3	3
Foreign Language	3	3	3
Educ. 301	3		
Psychology 312		3	
English 323			3
English 311-12-13 or English 331-2-3	3	3	3
Psy. 243	3		
Electives		3	3
Speech 201-2-3	3	3	3
	<hr/>	<hr/>	<hr/>
	18	18	18

Senior Year	Quarter Hours Credit		
	I	II	III
Name of Course			
English 411-12 or English 421-22	3	3	
Psych. 463	3		
English 451-371	3	3	
Educ. 387		3	
Educ. 462	3		
Educ. 471-2			15
Electives	3	6	
English 450-393 or 423	3	3	
	<hr/>	<hr/>	<hr/>
	18	18	15



## BACHELOR OF ARTS CURRICULUM IN ENGLISH

Freshman Year				Sophomore Year			
Quarter				Quarter			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	English 211-12-13	3	3	3
Foreign Language	3	3	3	English 221-2-3	3	3	3
History 201-2-3	3	3	3	Music 131			3
Mathematics	3	3	3	Biology 101-2-3 or			
Health 211-212	3	3		Natural Science 121-22-23	4	4	4
Art 133			3	Education 201	3		
P. E. or AFROTC	1	1	1	Psych. 242		3	
Orientation	1			P. E. or AFROTC	1	1	1
				Foreign Language	3	3	3
	17	16	16		17	17	17

Junior Year				Senior Year			
Quarter				Quarter			
Name of Course	I	II	III	Name of Course	I	II	III
English 361-2-3	3	3	3	English 411-12 or			
Foreign Language	3	3	3	English 421-22	3	3	
Educ. 301	3			English 451-371	3	3	
Psych. 312		3		Psych. 463		3	
English 323			3	Educ. 387	3		
English 311-12-13 or				Educ. 462	3		
English 331-2-3	3	3	3	Educ. 471-2			15
Psych. 243	3			Electives	3	6	
Elective		3		English 450-393 or 423	3	3	
Speech 201-2-3	3	3	3				
American Government							
221 or 222 or 223			3				
	18	18	18		18	18	15

## DEPARTMENT OF HISTORY, POLITICAL SCIENCE, AND GEOGRAPHY

ALONZO T. STEPHENS, Ph.D., Head

### General Statement

The Department offers several curricula leading to the Bachelor's degree, namely, History and Political Science and Geography.

The curriculum in History offers courses of study at the undergraduate level leading to the Bachelor of Arts and Bachelor of Science degrees.

The curriculum in Political Science offers courses of study at the undergraduate level leading to the degrees of Bachelor of Science and Bachelor of Arts.

Geography concentrates primarily in a minor program with a wide selection.

### CURRICULUM IN HISTORY

ALONZO T. STEPHENS, Ph.D., Head

Instruction in the curriculum of history is designed to present the main aspects of the rise and development of civilization. The curriculum emphasizes the social, economic, and political phases of history, but it also deals with the institutional, cultural, diplomatic and religious phases. The aim of the curriculum is to enable students to read historical literature critically and to acquaint students with the facts in the development of man and of civilization.

Instruction in history is designed to give to the student within the first two years a knowledge of the important events, characters and development in the past of mankind. To achieve this aim, the curriculum requires that all majors have a general understanding of certain related fields.

Instruction in history during the Junior and Senior year is designed to prepare students for service as junior and senior high school teachers in Social Sciences and History. A student must submit to the department one research paper on some phase of history defined by the department. The paper must demonstrate adequate ability to do research in source materials, to analyze and interpret data and to present findings in an adequately documented paper written in acceptable English.

Other purposes of the curriculum are to prepare students for careers in government service, social agencies—Local, State, National; graduate and professional studies, library assistantships, public service and politics, law, personnel administration, administrative assistantships and junior level executive positions in business and industry.

All students must complete 21 quarter hours in Foreign Languages (French, Spanish, or German). (6 courses) Students in T.E. Program will take 12 hrs.

All majors in history are required to select a minimum of 18 quarter hours on the 300 and 400 levels from the following three areas: (1) American History—United States (Colonial, Middle, Recent and Regional); (2) European History, and (3) World Civilization and Culture; The Far East or Latin America.

A major in history includes History 121-2-3; History 201-2-3; 301-2-3; 331; 341-42; 371; and 491 and/or 492; nine additional hours in Junior-Senior courses in history; Geog. 171-2-3 or Sociology 211-12-13 and Political Science 221-22-23. A major will complete a minimum of 45 hours in History. Courses should be completed in sequence.

Minor: A student who makes history his minor will complete: History 121-2-3 at freshman level; History 201-2-3 at sophomore level; History 301-2-3 at Junior level; History 341 or 42; History 491, 492 or 493. The student must complete 9 hours in American History and 9 hours in European History. Each student with a minor must have a minimum of 33 hours. With approval of his major adviser and the Coordinator of History, additional courses in a special area may be taken. Certification in history is granted only to students who complete the major history program/or persons who have a major in another Social Science Curriculum. Non teaching minor 27 hours.

### **STATE CERTIFICATION IN HISTORY, POLITICAL SCIENCE, AND GEOGRAPHY**

All students seeking the four year degree in any area must complete nine hours in American history and government, in the Department of History, Political Science, and Geography.

Recommended: Courses for non-departmental majors to follow this pattern in selecting nine hours.

Hist. 201-202-203—Select two for six hours.

Amer. Gov't. 221-222-223—Select one for three hours.

### **DEPARTMENTAL AFRICAN AMERICAN CULTURE (MINOR)**

Students completing 27 hours of Afro-American Studies: Geography of Caribbean 372, Urban Geography 382; African Geography 412, Political Science 453—Developing Political Science 455—Afro-American Diplomacy; African History 385-386-387 and Negro in American History 491-492-493 may receive a minor in Afro-American Culture. Those successfully completing the combination of 27 hours with "C" grades will be awarded a certificate of African American Culture.

Prerequisites for above minor and certificate are History 121-122-123; American History 201-202-203, and Political Science 221, and European History 301-302-303.

### **Description of Programs**

Students may select the program, Bachelor of Science with Teacher Education. The Bachelor of Science curriculum requires 9 hours in a Foreign Language. The number of quarter hours in language depends upon the number of hours in the one language acquired in high school. (See requirements for Bachelor's Degree). All students who seek certification in history must meet all requirements for teacher education including tests. All grades must be "C" or above or no less than 2.00 average.

Students who do not plan to teach but wish to qualify for careers in government, public services, law, professions, as writers, newspaper or communications men or seek a broad liberal education are advised to take the following non-teaching program leading to the Bachelor of Arts degree.



## BACHELOR OF ARTS CURRICULUM IN HISTORY

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
English 101-2-3	3	3	3
History 121-2-3	3	3	3
Science (Biology, Chemistry, or Natural Science)	4	4	4
Mathematics 111-2-3	4	3	3
Physical Ed. 11-12-13 or Air Science I (Men)	1	1	1
Orientation	1		
Social Studies		3	3
	<hr/> 16	<hr/> 17	<hr/> 17

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
English	3	3	3
Foreign Language	4	4	4
Social Studies (Economics, Polit. Sci., Sociology or Geography)	3	3	3
History 201-2-3	3	3	3
Psych. 221-2	3	3	3
Physical Ed 20's-50's or Air Science II (Men)	1	1	1
	<hr/> 17	<hr/> 17	<hr/> 17

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
Political Science	3		
History 341-2	3	3	
History 301-2-3	3	3	3
Minor	3	3	9
Social Studies		3	
Geog. 271-2-3 or Geog. 391, 411, 412	3	3	3
Foreign Language	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
History 491 and/or 492	3	3	
History (300-400)	3	3	3
Minor	3	3	3
History 450		3	
Electives (History)	3		6
History 491-2-3	3	3	3
	<hr/> 15	<hr/> 15	<hr/> 15

### Special Instruction for Teacher Education

Students seeking a major or minor in the B.S. program (designed exclusively for teacher education) are required to take the planned sequence for the History Curriculum—consisting of both the subject matter and professional courses. All incomplete grades and other deficiencies must be removed before the student may apply for History 472.

Students seeking a minor in History are required to take nine (9) hours in American History 201, 202 and 203; three (3) hours of Tennessee History 341 or 342 and nine (9) hours in European History at the 300 or 400 level. Other requirements for teacher education must be met:

1. Each student who desires to be admitted to the teacher education program will make application to the Director of Teacher Education the third quarter of his sophomore year after he has completed 30 quarter hours of work including the sophomore level of professional education.
2. Retention in the teacher education program will call for full compliance with standards and requirements of that program.

### Teacher Education in History with Concentration in Another Area

The following courses are required for students who seek certification in history (as a minor) graduating with a major in another area:

History 121-2-3; 201-2-3; 341 or 342; 301-2-3; 471, 491, 492, or 493.

Prerequisites for student teaching in history: All education and history course requirements at Freshman, Sophomore and Junior level:

Education 201  
Education 301  
Education 387  
Education 462  
Psychology 242  
Psychology 243  
Psychology 312  
Psychology 463  
History 371

Note: All students must earn 67 hours at 300-400 level.

The student must complete 9 hours in American History 201-2-3 and 9 hours in European History 301-2-3, or Contemporary World History 401-2-3. Each student must have a minimum of 45 quarter hours in history. All students must earn 67 hours at 300-400 level.



## CURRICULUM FOR TEACHER EDUCATION IN HISTORY

Freshman Year				Sophomore Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
English 101-2-3	I	II	III	American History 201-2-3	I	II	III
Math 111-12-13	3	3	3	or Honors	3	3	3
Biology, Science Education, Chemistry or Physics	4	4	4	History 281-2-3	3	3	3
Art 133, Health 151	3	3	3	English 211-12-13	3	3	3
History 121-22-23 or 181-2-3	3	3	3	Education 201	3	3	3
Phy. Ed. 11-12-13 or Air Science (Men)	1	1	1	Psychology 242-43	3	3	3
Orientation	1			Foreign Language			
				French or Spanish	4	4	4
				Psy. Ed. 20's-50's or Air Science	1	1	1
				Geography 171-2-3	3	3	3
	16	17	17		17	17	17

NOTE: Students must take and pass the Sophomore Examination, other requirements, and complete forms for admission to the teacher education program at the end of the sophomore year.

Students will not take any 300 level education courses unless above requirements are completed.

Students are required to take twelve (12) hours of Foreign Language.

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
History 341-342	I	II	III	Education 462	I	II	III
History 301-2-3	3	3	3	Psychology 463	3		
Education 301	3			History 300 (Electives)	3	6	
Education 312		3		Senior Project 450	3		
Education 387			3	Political Science 300-400's	3	3	
Pol. Sci. 221-2-3	3	3	3	History 300's (Electives)		3	
History 371				Sociology 211-212			
(Teaching of Hist/ POS/Geog)	3			or Geog. 200's	3	3	
Political Science 300 (Electives)		3	6	Student Teaching 472			15
History 331	3			Hist. 491 or 492, or 493	3		
	18	15	15		18	18	15

## CURRICULUM IN POLITICAL SCIENCE

JAMES DENNIS, SR., Ph.D., (Senior Adviser)

The general objectives of the curriculum in Political Science are (1) to provide a broad background for understanding and evaluating government functions and problems, and to teach citizenship and human relations; (2) to provide a survey of the economic, social, and psychological factors which underlie politics; (3) to prepare students for teaching careers, government service, various types of social service, and admission to graduate schools and schools of law.

The curriculum offers undergraduate courses leading to the degrees of Bachelor of Arts and Bachelor of Science. Each of these programs requires the completion of a total of 198 hours. Sixty-six hours must be in courses on the 300 and 400 level. Majors in the A.B. Degree program must also complete one minor field of study. The minimum number of hours for a major in political science is 45.

Majors who expect to teach will follow the education requirements as stated.

Students desiring Planning as a possible career should elect Political Science 421-2-3. Suggested electives in the B.S. Degree include Industrial Education 400, Office Administration 21-2-3, 31-2-3, 46, 53-4, 211-2-3, English 321-2, 453-4, Political Science 321-2-3, 353, 373, Educational Psychology 242, Education 201 and Speech 201-2-3.

A minor in Political Science consists of 27 hours in this subject, nine hours of which are Political Science 221-2-3, and the remainder are 300 and 400 level courses.

For a minor in Aerospace Studies only Air Science 351-2-3 may be substituted for corresponding quarters in Political Science 341-2-3, History 301-2-3 and/or History 391-2-3.

BACHELOR OF ARTS

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Orientation	1		
English 101-2-3	3	3	3
History 121-2-3	3	3	3
Mathematics 111-2-3	4	3	3
Physical Education			
11-2-3 or Air Science	1	1	1
Science, Biol. or Chem.	4	4	4
Music 131 or Art 133			3
	16	14	17

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 211-2-3	3	3	3
Foreign Language	4	4	4
Geography 171-2	3	3	
History 201, 202, 203	3	3	3
Physical Educ. 20's-50's			
or Air Science	1	1	1
Pol. Sci. 221-2, 313	3	3	3
English 271			3
	17	17	17

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Economics or Bus. Adm.	3	3	3
Foreign Language	3	3	3
Political Science			
POS 392 & 363	3	3	
Political Sci. 341-2-3	3	3	3
Sociology 211-2-3	3	3	3
Electives			3
Psychology 221-2	3	3	
	18	18	15

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Electives		6	
Geography 391	3		
History (European			
300-400's)	3	3	3
Philosophy 323 or			
Speech 201-2-3	3		
Pol. Sci. 450 etc.	6	3	6
Soc. Adminstrn. 342			3
Foreign Language	3	3	3
	18	15	15

BACHELOR OF SCIENCE WITH CERTIFICATION

Political Science Teacher Education: Political Science majors seeking certification will take the following courses in Education: 201, 301, 387, 371, 462, 472 and Psychology 463, 221-222 or 242-243.

NOTE: Students must pass the Sophomore Examinations and other requirements and complete forms for admission to the Teacher Education Program at the end of the Sophomore year.

Students will not take 300 level course in Teacher Education Program unless above requirements are completed.

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
Health 151		3	
History 121-2-3	3	3	3
Mathematics 111-2-3	4	3	3
Phys. Ed. 11-2-3 or			
Air Science	1	1	1
Sci. Bio. or Chem.	4	4	4
Orientation	1		
Music 131 or Art 133			3
	16	17	17

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Pol. Sci. 321-2-3	3	3	3
English 211-2-3	3	3	3
English 271	3		
History 201-2-3	3	3	3
Phys. Ed. 20's-50's or			
Air Science	1	1	1
Political Science 221-2-3	3	3	3
Psychology 221-2	3	3	
Education 201			3
	16	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Econ 211,2,3 or			
Business 200's	3	3	3
Educ. 301-312, 387	3	3	3
Geog. 271,2,3	3	3	3
Pol. Sci. 312-333-4	3	3	3
Pol. Sci. 341-2-3	3	3	3
Sociology 211-2	3	3	
Hist/POS/Geo 371			3
	18	18	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Education 462	3		
Psychology 463	3		
Pol. Sci. 313-373	3	3	
Senior Project 450	3		
Philosophy 323	3		
Pol. Sci. (3 of 400)	3	6	
History 401-2		6	
Education 472			15
	18	15	15

Department of Modern Foreign Languages

WENDOLYN Y. BELL, Ph.D., Head

The offerings of the Department of Modern Foreign Languages are designed to meet the needs of those who are (1) preparing for careers as secondary school

teachers of foreign languages, (2) desiring positions in business, industry, or government, (3) planning to attend graduate school, or (4) satisfying degree requirements for other departments of the University.

The curricula encompass courses leading to the Bachelor of Arts degree in French or Spanish with or without certification, or a joint major in French or Spanish and Accounting, Business Administration or Secretarial Science. For graduation the minimum requirements are 198 quarter hours and a cumulative average of "C." "C" is the lowest acceptable grade for departmental majors and minors in any required foreign language course; courses in which majors receive "D" or below must be repeated. Moreover, students in the certification program are required to maintain an average of 2.25 in their major courses.

In the senior year, departmental majors take a comprehensive examination in the major field.

The department offers a minor in French, German, or Spanish.

**ALL ELEMENTARY AND INTERMEDIATE COURSES MUST BE TAKEN IN SEQUENCE.**

#### **A. French or Spanish Major with Certification**

Students who elect a major in French or Spanish must complete a minimum of thirty hours in courses above 203 to include 300, 301-2-3, 311-12-13 and 314 or 315, and 441-2. It is desirable that students minor in a second foreign language.

#### **B. French or Spanish Major without Certification**

Students who choose a major in French or Spanish must complete a minimum of thirty-six quarter hours in courses above 203 to include 300, 301-2-3, 311-12-13 and 314 or 315, 441-2, and six hours additional.

#### **C. French or Spanish and Business Areas**

Required courses in foreign languages are 101-2-3, 201-2-3, 300, 301-2-3, 441-42; 481-82 and 450. The business core includes BA101-2, OA2-12-13, Acctg211-12-13, Econ211-12-13, Eng321, BA335, 323-24-25. Advanced courses needed to satisfy degree requirements in Accounting, Business Administration, or Secretarial Science are as follows:

1. **Accounting** 311-12-13; 314-15-16; 320, 400-401, and 411-12 or 413-14.

##### **2. Business Administration**

Alternative I: BA 301, 331-32, 441, 442; Econ 301, 315; Eng 322.

Alternative II: BA 301, 326-27, 331-32; Econ 301, 315; Eng 322.

##### **Secretarial Science**

OA 202, 204-5-6, 221, 304, 305-6, 434; Eng 322. Suggested electives are OA 301 and 302.

#### **D. French, German, or Spanish Minor with Certification**

Students who choose this option are required to complete the following courses above 203; pronunciation and diction (300); six hours in literature (311-12-13-14-15), six hours in advanced oral and written composition (301-2-3).

#### **E. French, German, or Spanish Minor without Certification**

Minimum requirements of courses above 203 are: pronunciation and diction (300) nine hours in literature (311-12-13-14-15), and nine hours in advanced oral and written composition (301-2-3).

To be recommended for certification, in addition to requirements outlined above, students must complete the departmental course in methods (371), and do student teaching.

For French or Spanish majors with certification, required courses in related fields are Geography 172 and Speech 201, 202, or 221. For French majors without certification: History 121-2-3; Speech 201, 202 or 221; Political Science 321-2-3, or 341-2-3 or History 301-2-3; Philosophy 323. Spanish majors without certification: History 121-2-3, Speech 201 or 202, or 221; nine hours in Political Science 321-2-3, or 331-2, or History 301-2-3, or 451-2-3.



# CURRICULUM IN FRENCH WITH CERTIFICATION

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
French 101-2-3	4	4	4	French 201-2-3	3	3	3
English 101-2-3	3	3	3	French 300			3
Math 111-2	4	3		English 211-2-3	3	3	3
History 201-2,				Second Lang.			
Pol. Sci. 223	3	3	3	(Minor) 101-2-3	4	4	4
Orientation	1			Biology 101-2-3 or			
P. E. 11-12-13 or				Chem. 111-2-3 or			
Air Science 151-2-3	1	1	1	Sci. 121-2-3	4	4	4
Music 131 or Art 133		3		Psy. 242-3	3	3	
Education 201			3	P. E. 20's to 50's			
Health 151, 211 or				or Air Science	1	1	1
Nutrition 212			3				
Freshman Assembly	0	0	0				
	16	17	17		18	18	18
Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
French 301-2-3	3	3	3	French 314 or 315	3		
French 411-12-13	3	3	3	French 441-2	3	3	
Second Lang.				Second Lang.			
(Minor) 201-2-3	3	3	3	Minor 301-2	3	3	
Second Lang.				Second Lang.			
(Minor) 300			3	(Minor) 311-12	3	3	
Education 301	3			Senior Project 450	3		
Psychology 312	3			Education—MFL 371		3	
Geography 172	3			Electives	3	3	
Education 387		3		Education 472s			15
Psychology 463			3				
Speech 201, 202 or 221			3				
	18	18	18		18	15	15

# CURRICULUM IN SPANISH WITH CERTIFICATION

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Spanish 101-2-3	4	4	4	Spanish 201-2-3	3	3	3
English 101-2-3	3	3	3	Spanish 300			3
Math 111-2	4	3		English 211-2-3	3	3	3
Hist. 201-2, Pol. Sci. 223	3	3	3	Second Lang.			
Orientation 101	1			(Minor) 101-2-3	4	4	4
P. E. 11-12-13 or				Biology 101-2-3 or			
Air Science 151-2-3	1	1	1	Chem. 111-2-3 or			
Music 131 or Art 133		3		Science 121-2-3	4	4	4
Education 201			3	Psychology 242-3	3	3	
Health 151, 211 or				P. E. 20's to 50's or			
Nutrition 212			3	Air Science	1	1	1
Freshman Assembly	0	0	0				
	16	17	17		18	18	18
Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Spanish 301-2-3	3	3	3	Spanish 314	3		
Spanish 311-12-13	3	3	3	Spanish 441-2	3	3	
Second Lang.				Second Lang.			
(Minor) 201-2-3	3	3	3	(Minor) 301-2	3	3	
Second Lang.				Second Lang.			
(Minor) 300			3	(Minor) 311-12	3	3	
Education 301	3			Senior Project 450	3		
Psychology 312	3			Education—MFL 371		3	
Geography 172	3			Electives	3	3	
Education 387		3		Education 472s			15
Elective		3					
Education 462		3					
Psychology 463			3				
Speech 201, 202 or 221			3				
	18	18	18		18	18	18

## CURRICULUM IN FRENCH WITHOUT CERTIFICATION

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
French 101-2-3	4	4	4
English 101-2-3	3	3	3
Math 111-2-3	4	3	3
History 121-2-3	3	3	3
Orientation 101	1		
P. E. 11-212-13 or Air Science 151-2-3	1	1	1
Music 131 or Art 133		3	
Geog. 172			3
Freshman Assembly	0	0	0
	<hr/> 16	<hr/> 17	<hr/> 17

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
French 201-2-3	3	3	3
French 300			3
Second Lang. (Minor) 101-2-3	4	4	4
English 211-2-3	3	3	3
Biology 101-2-3 or Chem. 111-2-3 or Science 121-2-3	4	4	4
Hist. 201-2	3	3	
P. E. 20's to 50's or Air Science	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
French 301-2-3	3	3	3
French 311-12-13	3	3	3
Second Lang. (Minor) 201-2-3	3	3	3
Second Lang. (Minor) 300			3
Education 201	3		
Psychology 242-3		3	3
Speech 201, 202 or 221	3		
Pol. Sci. 223		3	
Pol. Sci. 321-2-3 or 341-2-3 or History 301-2-3	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
French 314 or 315	3		
French 441-2	3	3	
French 451-2-3 or 461-2-3		3	3
Second Lang. (Minor) 301-2-3	3	3	3
Second Lang. (Minor) 311-12-13	3	3	3
Senior Project 450	3		
Philosophy 323		3	
Electives			6
	<hr/> 15	<hr/> 15	<hr/> 15

## CURRICULUM IN SPANISH WITHOUT CERTIFICATION

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
Spanish 101-2-3	4	4	4
English 101-2-3	3	3	3
Math 111-2-3	4	3	3
History 121-2-3	3	3	3
Orientation 101	1		
P.E. 11-12-13 or Air Science 151-2-3	1	1	1
Music 131 or Art 133		3	
Geog. 172			3
Freshman Assembly	0	0	0
	<hr/> 16	<hr/> 17	<hr/> 17

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
Spanish 201-2-3	3	3	3
Spanish 300			3
Second Lang. (Minor) 101-2-3	4	4	4
English 211-2-3	3	3	3
Biology 101-2-3 or Chem. 111-2-3 or Sci. 121-2-3	4	4	4
Hist. 201-2	3	3	
P.E. 20's to 50's or Air Science	1	1	1
	<hr/> 18	<hr/> 18	<hr/> 18

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
Spanish 301-2-3	3	3	3
Spanish 311-12-13	3	3	3
Second Lang. (Minor) 201-2-3	3	3	3
Second Lang. (Minor) 300			3
Education 201	3		
Psychology 242-3			
Speech 201, 202, or 221	3		
Pol. Sci. 223		3	
Pol. Sci. 321-2-3 or 331-2 or Hist 301-2-3 or 451-2-3	3	3	3
	<hr/> 18	<hr/> 18	<hr/> 18

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
Spanish 314	3		
Spanish 441-2	3	3	
Spanish 321-2-3 or 451-2-3 or 461-2-3	3	3	3
Second Lang. (Minor) 301-2-3	3	3	3
Second Lang. (Minor) 311-12-13	3	3	3
Senior Project	3		
Philosophy 323		3	
Electives			6
	<hr/> 18	<hr/> 15	<hr/> 15

**CURRICULA FOR A CO-MAJOR IN FRENCH OR SPANISH AND ACCOUNTING,  
BUSINESS ADMINISTRATION OR SECRETARIAL SCIENCE**

**A. FRENCH OR SPANISH AND ACCOUNTING**

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-2	3	3	3	For Lang 201-2-3	3	3	3
Math 101-2; 173	3	3	3	Acctg 211-12-13	4	4	4
Orientation 101 (Eng or Bus. Ed.)	1			Bio 101-2-3 or Chem 111-12-13 or Sci 121-2-3	4	4	4
P.E. 11-12-13 or Air Science 151-2-3	1	1	1	Econ 211-12-13	3	3	3
For Lang 101-2-3	4	4	4	P.E. 20's-50's or Air Science	1	1	1
Hist 201-2; Pol Sci 223	3	3	3	Art 133 or Music 131	3		
BA 101-2		3	3	Geog 172		3	
Freshman Assembly	0	0	0	For Lang 300			3
	15	17	17		18	18	18

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
For Lang 301-2-3	3	3	3	For Lang 441-2	3	3	
Eng 211-12-13	3	3	3	For Lang 481-2	3	3	
OA 211-12-13	3	3	3	BA 323-24-25	3	3	3
Acctg 311-12-13	3	3	3	Acctg 314-15-16	3	3	3
Acctg 411-12	3	3		Acctg 400-01 or 413-14		3	3
Eng 321	3			MFL 450	3		
B.A. 335		3		Electives			6
Acctg 320			3				
Speech 201, 202, or 203			3				
	18	18	18		15	15	15

**B. FRENCH OR SPANISH AND BUSINESS ADMINISTRATION**

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Eng 101-2-3	3	3	3	Eng 211-12-13	3	3	3
Math 101-2; 173	3	3	3	Bio 101-2-3 or Chem 111-12-13 or Sci 121-22-23	4	4	4
Orientation 101 (Eng or Bus. Ed.)	1			P.E. or Air Science	1	1	1
P.E. 11-12-13 or Air Science 151-2-3	1	1	1	For Lang 201-2-3	3	3	3
For Lang 101-2-3	4	4	4	Econ 211-12-13	3	3	3
Hist 201-2; Pol Sci 223	3	3	3	Mus 131 or Art 133	3		
BA 101-2		3	3	Geog 172		3	
Freshman Assembly	0	0	0	For Lang 300			3
	15	17	17		17	17	17

Junior Year				Alternative I			
Quarter Hours Credit				Senior Year			
Name of Course	I	II	III	Name of Course	I	II	III
For Lang 301-2-3	3	3	3	For Lang 441-42	3	3	
OA 211-12-13	3	3	3	For Lang 481-83	3	3	
Acctg 211-12-13	4	4	4	BA 331-32	3	3	
BA 323-24-25	3	3	3	BA 301	3		
Eng 321-2	3	3		MFL 450	3		
BA 335			3	Econ 301		3	
Speech 201, 202 or 203			3	Econ 315			3
	16	16	19	BA 422			3
				BA 441			3
				Electives		6	6
					15	18	15



<b>Alternative II</b>			
Name of Course	I	II	III
For Lang 441-42	3	3	
For Lang 481-82	3	3	
B A 326-27	3	3	
B A 331-32	3	3	
MFL 450	3		
Econ 301	3		
B A 441			3
Electives		6	12
	18	18	15

### C. FRENCH OR SPANISH AND SECRETARIAL SCIENCE

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Eng 101-2-3	3	3	3	For Lang 201-2-3	3	3	3
Math 101-2, 173	3	3	3	Bio 101-2-3 or Chem 111-12-13 or Sci 121-2-3	4	4	4
Orientation 101 (Eng or Bus Ed)	1			P.E. 20's to 50's or Air Science	1	1	1
P.E. 11-12-13 or AFROTC 151-2-3	1	1	1	Eng 211-12-13	3	3	3
Hist 201-2, Pol Sci 223	3	3	3	O A 211-12-13	3	3	3
For Lang 101-2-3	4	4	4	Art 133 or Mus 131	3		
B A 101-2		3	3	Geog 172		3	
Freshman Assembly	0	0	0	For Lang 300			3
	15	17	17		17	17	17

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Eng 321-2	3	3		For Lang 441-2	3	3	
B A 335			3	For Lang 481-2	3	3	
O A 204-5-6	3	3	3	B A 323-24-25	3	3	3
Acctg 211-12-13	4	4	4	O A 304	3		
Econ 211-12-13	3	3	3	O A 305-6		3	3
For Lang 301-2-3	3	3	3	O A 434			3
O A 202	3			MFL 450	3		
O A 221		3		Electives		3	6
Speech 201, 202, or 203			3				
	19	19	19		15	15	15

### Department of Physics and Mathematics

**SADIE C. GASAWAY, Ph.D., Head**

The Department of Physics and Mathematics offers programs leading to the degrees of Bachelor of Science and Bachelor of Arts with a major in Physics or Mathematics.

The courses in physics and mathematics are designed to serve (1) those who wish to major or minor in physics or mathematics; (2) those who require physics and/or mathematics as a part of their pre-professional training; (3) those majoring in areas other than physics or mathematics to whom the knowledge and techniques of physics and/or mathematics are desirable adjuncts.

Candidates for degrees with majors in physics or mathematics must (1) complete a minimum of 198 quarter hours of prescribed and elective course work, (2) have a minimum grade of "C" for all courses in the major field. Electives in the major field must be selected from courses at the 300- and/or 400-level.

Candidates for the Bachelor of Arts degree must satisfy the requirements of the university in foreign languages stated elsewhere. (For a student who has had no foreign language in high school, the foreign language requirement is 27 quarter hours of work in one language for the Bachelor of Arts degree).

Each major in physics is expected to minor in mathematics by completing a minimum of 15 quarter hours of courses numbered 300 and above. A minimum grade of "C" in each course in the minor field is required.

All courses offered for major or minor credit in physics or mathematics must be approved by the Department of Physics and Mathematics.

## CURRICULUM IN PHYSICS

Majors in physics are required to complete a minimum of 49 (45 for teacher education) quarter hours of course work in physics, with a minimum of 36 (33 for teacher education) quarter hours selected from physics courses numbered 300 and above. Minors in physics must complete a minimum of 30 quarter hours of course work in physics with a minimum of 18 quarter hours selected from physics courses numbered 300 and above.

## BACHELOR OF ARTS OR BACHELOR OF SCIENCE PROGRAM

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	English 211-12-13	3	3	3
Math 161-2-3				Math 261-2-3	5	5	5
or				or			
Math 163-261-2	5	5	5	Math 263; 341 electives	5	3	3
P. E. 11-12-13 or				Physics 221-2-3	4	4	4
Air Science	1	1	1	Chemistry 111-12-13	4	4	4
History 201-2	3	3		P. E. 20's to 50's or			
Amer. Govt. 221			3	Air Science	1	1	1
Health 151	3				17	15	15
Music 131		3			or	or	or
Art 133			3				
Physics 193	1						
Computer Sc. 193; 291		2	2				
	16	17	17			17	17
Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Physics 311-12-13	3	3	3	Physics 412-13-14	3	3	3
Physics 321-2-3	3	3	3	German or French	3	3	3
Physics 331-2-3	2	2	2	Physics 450		3	
German or French	4	4	4	Approved Electives	12	6	12
Math 461-2; electives	3	3	3				
English 323	3						
Approved Electives		3					
	18	18	15		18	15	18

## BACHELOR OF SCIENCE PROGRAM (Teacher Education)

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	Math 261-2-3 or	5	5	5
Math 161-2-3				Math 263; 341; elective	5	3	3
Math 163; 261-2	5	5	5	Physics 211-12-13	4	4	4
History 201-2	3	3		Education 201	3		
Amer. Govt. 221			3	Psychology 242-3		3	3
Health 151	3			Chemistry 111-12-13	4	4	4
Music 131		3		P. E. 20 to 50 or			
Art 133			3	Air Science	1	1	1
P. E. 11-12-13					17	15	15
or Air Science	1	1	1		or	or	or
Physics 193	1						
Computer Science 193; 291		2	2				
	16	17	17			17	17

## BACHELOR OF SCIENCE PROGRAM (Teacher Education)

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	Math 261-2-3	5	5	5
Math 161-2-3				or			
Math 163; 261-2	5	5	5	Math 263; 341; elective	5	3	3
History 201-2	3	3		Physics 211-12-13	4	4	4
Amer. Govt. 221			3	Education 201	3		
Health 151	3			Psychology 242-3		3	3
Music 131		3		Chemistry 111-12-13	4	4	4
Art 133			3	P.E. 20 to 50 or			
P. E. 11-12-13 or				Air Science	1	1	1
Air Science	1	1	1				
Physics 193	1						
Computer Science 193; 291		2	2				
	16	17	17		17	15	15
					or	or	or
					17	17	17

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 211-12-13	3	3	3	Physics 321-2	3	3	
Physics 311-12-13	3	3	3	Education 462	3		
Physics 331-2-3	2	2	2	Psychology 463		3	
Math 462-3	3	3		Education 472			15
Psychology 312		3		English 323	3		
Physics 371			3	Health 212	3		
Education 301, 387	3		3	Social Science	3		
Physics 412-13-14	3	3	3	Philosophy 323		3	
	—	—	—	Physics 450		3	
				Approved electives	3	6	
	17	17	17		18	18	15

## CURRICULUM IN MATHEMATICS

Majors in mathematics are required to complete a minimum of 50 quarter hours of course work in mathematics exclusive of Mathematics 191-2-3, 161, 162 and 291-2-3. A minimum of 30 quarter hours must be selected from courses numbered 300 and above. Minors in mathematics must complete a minimum of 15 quarter hours selected from mathematics courses numbered 300 and above.

### Required Courses

Mathematics 163, 261-2-3, 341, 361-2-3-4, and 450 are required of all majors. Mathematics 371 is required of all majors in teacher education.

### Survey Courses

Mathematics 191-2-3-4, 291-2-3, 391-2-3, 491-2-3 are one (1) quarter hour credit courses designed to broaden the student's scope, and at the same time to give a preview of material the student will encounter in later courses. Although these courses are not required for graduation, each major is urged to include one of these courses in his program each quarter.

### Theoretical and Applied Group.

Juniors and Seniors are offered two types of programs, a theoretical program and an applied one.

The theoretical program is designed primarily for students planning to do graduate study in pure mathematics. In addition to the required courses, their programs should include Mathematics 331-2-3, 451-2-3, 473, and selected topics of Mathematics 480.

Students who are more interested in the application of mathematical techniques may choose their electives from Mathematics 311-12-13, 461-2-3, 472, and selected topics of Mathematics 480.

## BACHELOR OF ARTS OR BACHELOR OF SCIENCE PROGRAM

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-2-3	3	3	3	English 211-12-13	3	3	3
Math 161-2-3				Math 261-2-3	5	5	5
or				or			
Math 163; 261-2	5	5	5	Math 263; 341; elective	5	3	3
History 201-2	3	3		Health 151	3		
Amer. Govt. 221			3	Music 131		3	
Biol. or Chem.	4	4	4	Art 133			3
P.E. 11-12-13 or				Physics 221-2-3	4	4	4
Air Science	1	1	1	Computer Science 193, 291		2	2
Math 191-2-3	1	1	1	P. E. 20's to 50's	1	1	1
	—	—	—		16	18	18
					—	or	or
	17	17	17			16	16



Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Math 341; 361-2-3 .....	6	3	3
or			
Math 361-2-3 elective .....	6	3	3
English 323 .....			3
French or German .....	4	4	4
Philosophy 323 .....		3	
Electives (Physics Soc. Sci. & Others) .....	6	3	3
Math 364 .....			3
	<u>16</u>	<u>16</u>	<u>19</u>

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Math 450 .....	3		
French or German .....	3	3	3
Electives (Math) .....	3	6	3
Approved electives .....	9	6	9
	<u>18</u>	<u>15</u>	<u>15</u>

Freshman Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 101-2-3 .....	3	3	3
Math 161-2-3 .....			
or			
Math 163; 261-2 .....	3	3	
History 201-2 .....	3	3	
Amer. Govt. 221 .....			3
Biology or			
Chem. 111-12-13 .....	4	4	4
P.E. 11-12-13 or			
Air Science .....	1	1	1
Math 191-2-3 .....	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Sophomore Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 211-12-13 .....	3	3	3
Math 261-2-3 .....	5	5	5
or			
Math 263; 341; electives .....	5	3	6
Health 151 .....	3		
Music 131 .....		3	
Art 133 .....			3
Education 201 .....	3		
Psychology 242-3 .....		3	3
Phy. Ed. 20's to 50's or Air Science .....	1	1	1
Computer Sc. 193; 291 .....	2	2	
Electives .....			3
	<u>17</u>	<u>15</u>	<u>18</u>
or		<u>17</u>	<u>19</u>

Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Math 341; 361-2-3 .....	6	3	3
or			
Math 361-2-3; elective .....	6	3	3
Education 301; 387 .....	3	3	
Math 371 .....			3
Physics 211-12-13 or			
Physics 221-2-3 .....	4	4	4
Psychology 312 .....		3	
English 323 .....			3
Electives (Math & Soc. Sc.) .....	3	3	3
	<u>16</u>	<u>16</u>	<u>16</u>

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Philosophy 323 .....		3	
Education 462 .....	3		
Math 450 .....		3	
Psychology 463 .....		3	
Health 212 .....	3		
Education 472 .....			15
Math 364 .....	3		
Electives (Math & Others) .....	9	9	
	<u>18</u>	<u>18</u>	<u>15</u>

## Department of Sociology

SHERMAN N. WEBSTER, Ed.D., Head

The Department of Sociology offers two curricula leading to the bachelor's degree, namely Social Administration and Sociology.

The curriculum in Social Administration offers courses of study at the undergraduate level leading to the degrees of Bachelor of Arts and Bachelor of Science.

The curriculum in Sociology offers courses of study at the undergraduate level leading to the Bachelor of Arts and Bachelor of Science degrees.

## COURSES IN SOCIAL STUDIES

Social Studies 111-112-113-114. Designed to acquaint the prospective teacher with an integrated, general educational approach to the understanding of basic factors in social life

in terms of social adjustment and social problems, economic organization, political behavior, including international relations—all in an appropriate historical setting.

**111-12-13E. Social Institutions: Their Nature and Change.** (12) Presents a multi-disciplinary approach to the study of man's personal, social and natural environment. Students are encouraged to use the tools and techniques of the social scientist to develop critical thinking, inductive and deductive reasoning, hypothesis formulation and testing, and generalizations. Topics—Youth and Society. The Family, American Cities and Urban Problems, and the Civil Rights Movement and Revolution. (General orientation is included).

**181H-2-3. Honors Social Sciences.** (9) This course is designed to acquaint the student with the many facets of the Social Sciences including the evolution of man's culture from both the Anthropological and Sociological viewpoint. A comparative study of primitive and contemporary ways of life of the various groups of mankind throughout the world; projections into the future relative to the different philosophies and ideologies and their effect on the technological advancements of the peoples of the world.

## CURRICULUM IN SOCIOLOGY

The general design of the curriculum in sociology embraces a four-fold objective: (1) to provide systematic framework for understanding the nature of human relationships; (2) to train students for employment in civil service and community organization; (3) to prepare students for advanced specialized study in Sociology; and (4) to train students to conduct research in the fundamental problems of social science.

The curriculum in Sociology offers courses of study at the undergraduate level leading to the degrees of Bachelor of Arts and Bachelor of Science.

Students in the curriculum are required to take a minimum of one major and one minor.

In addition to the University requirements for graduation, the minimum curriculum requirements are: (1) 198 quarter hours for the Bachelor of Arts degree, 198 quarter hours for the Bachelor of Science degree, of which a minimum of 66 quarter hours for each degree must be completed in 300 and 400 level courses; (2) 45 quarter hours in the curriculum of which a minimum of 24 quarter hours must be completed in 300 and 400 level courses for the Bachelor of Arts and Bachelor of Science degrees.

Students who minor in the curriculum must complete a minimum of 18 quarter hours in 300 and 400 level courses in addition to the basic courses, Sociology 211, 212, and 213.

## Bachelor of Arts

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
English 101-2-3	3	3	3
Foreign Language	4	4	4
History 121-2-3	3	3	3
Geog. 171-2		3	3
Mathematics 111-2-3	4	3	3
Physical Education 11-12-13 or Air Science 151-2-3	1	1	1
Orientation	1		
	<u>16</u>	<u>17</u>	<u>17</u>

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
English 211-2-3	3	3	3
Foreign Language	3	3	3
Sociology 211-2-3	3	3	3
Psychology 221-2, Geog 173	3	3	3
Physical Education 30's to 50's or Air Science 251-2-3	1	1	1
Natural Science	4	4	4
	<u>17</u>	<u>17</u>	<u>17</u>

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
History 201-2-3	3	3	3
Pol. Sci. 221-2-3	3	3	3
Psychology 242			3
Psych. 223			3
Speech 202		3	
Sociology 322	3		
Sociology 303			3
Sociology 200's, 300's or 400's	6	6	6
Foreign Language or Art 133, Music 131 and Pol. Sci. 313, Electives	3	3	3
	<u>18</u>	<u>18</u>	<u>18</u>

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
Health 301	3		
History 300's or 400's			3
Psychology 311		3	
Sociology 491	3		
Sociology 450	3		
Electives		6	3
Economics 211-2-3	3	3	3
Sociology 300's or 400's	3	3	3
	<u>15</u>	<u>15</u>	<u>12</u>

## Bachelor of Science

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
History 121-2-3	3	3	3
Geography 171-2-3	3	3	3
Mathematics 111-2-3	4	3	3
Physical Ed. 11-12-13 or Air Science 151-2-3	1	1	1
Orientation	1		
Health 151; Music 131 or Art 133		3	3
	15	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Psychology 311	3		
History 201-2-3	3	3	3
Pol. Sci. 221-2-3	3	3	3
Pol. Sci. 313			3
Philosophy 323 or 301		3	
Sociology 221	3		
Sociology 322	3		
Sociology 351	3		
Sociology 303		3	
Sociology 393		3	
Soc. 200's, 300's or 400's		3	9
	18	18	18

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 211-2-3	3	3	3
Sociology 211-2-3	3	3	3
Psychology 221-2	3	3	
Economics 211-2-3	3	3	3
Psychology 242			3
Physical Ed. 20's to 50's or Air Science 251-2-3	1	1	1
Natural Science	4	4	4
	17	17	17

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Health 301	3		
History 300's or 400's			3
Sociology 491	3		
Sociology 300's or 400's	6	6	3
Sociology 450	3		
Electives		9	6
	15	15	12

## CURRICULUM IN SOCIAL WELFARE

ANNIE B. MARTIN, MSSW, Director

The pre-professional Social Work Curriculum is designed: (1) to give students some insight into the basic social work processes which include group work, casework and community organization; (2) to help students know the importance of understanding human behavior as a means of working with people who have social problems; (3) to provide an opportunity to apply theory to practice in an agency setting. These objectives lead toward preparing students for immediate employment or professional education.

Students are required to spend seventy-two (72) hours per quarter in Field Experience in selected social agencies. The purpose of field experience is to provide the student with the opportunity to apply theory to actual experience in a controlled setting under the supervision and guidance of a qualified practitioner. He is then evaluated upon the basis of his growth and development on the job.

The Curriculum in Social Welfare offers the Bachelor of Science and Bachelor of Arts Degrees.

Requirements for graduation: (1) A student must complete a minimum of 192 quarter hours for either the Bachelor of Science or Bachelor of Arts Degree, of which a minimum of 66 quarter hours must be completed in the 300 and 400 level courses; (2) 42 quarters in the curriculum in 300 and 400 level courses. Courses in the major curriculum in which a student receives the grade of "D" must be repeated.

Students who minor in the Curriculum must complete a minimum of 18 quarter hours in 300 and 400 level courses in social welfare including 341, 342, 351-2-3.

The area of Social Welfare has memberships in the Council of Community Services, Nashville and Council on Social Work Education, Undergraduate Section, New York, New York.



## CURRICULUM IN SOCIAL WELFARE BACHELOR OF SCIENCE

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
History 121-2-3	3	3	3
Mathematics 111-12-13	4	3	3
Sociology 211-12-13	3	3	3
Physical Ed. 11-12-13	1	1	1
or			
Air Science I (M)	1	1	1
Music 131		3	
Art 133			3
Orientation	1		3
	<u>15</u>	<u>16</u>	<u>16</u>

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Free Electives	3	3	3
Sociology 322	3		
Political Science 421		3	
Sociology 351		3	
Social Welfare 341	3		
Social Welfare 342			
or			
482H		3	
Art 411			3
Psychology 321			5
Social Welfare 351-2-3	4	4	4
Economics 211-12-13	3	3	3
	<u>16</u>	<u>19</u>	<u>18</u>

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 211-12-13	3	3	3
Political Science 221-312	3	3	
Psychology 221-2	3	3	
Psychology 311			3
Speech 202			3
History 201-2-3	3	3	3
Physical Ed. 20's to 50's	1	1	1
or			
Air Science	1	1	1
Biology 101-2-3	4	4	4
	<u>17</u>	<u>17</u>	<u>17</u>

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Psychology 351		5	
Free Elective			3
Social Welfare 401-2-3	3	3	3
Social Welfare 405-6-7	2	2	2
Sociology 303	3		
Social Welfare 450		3	
Social Welfare 451			3
Social Welfare Electives	3		3
Sociology 412		3	
Sociology 461	3		
Philosophy 321	3		
	<u>17</u>	<u>16</u>	<u>14</u>

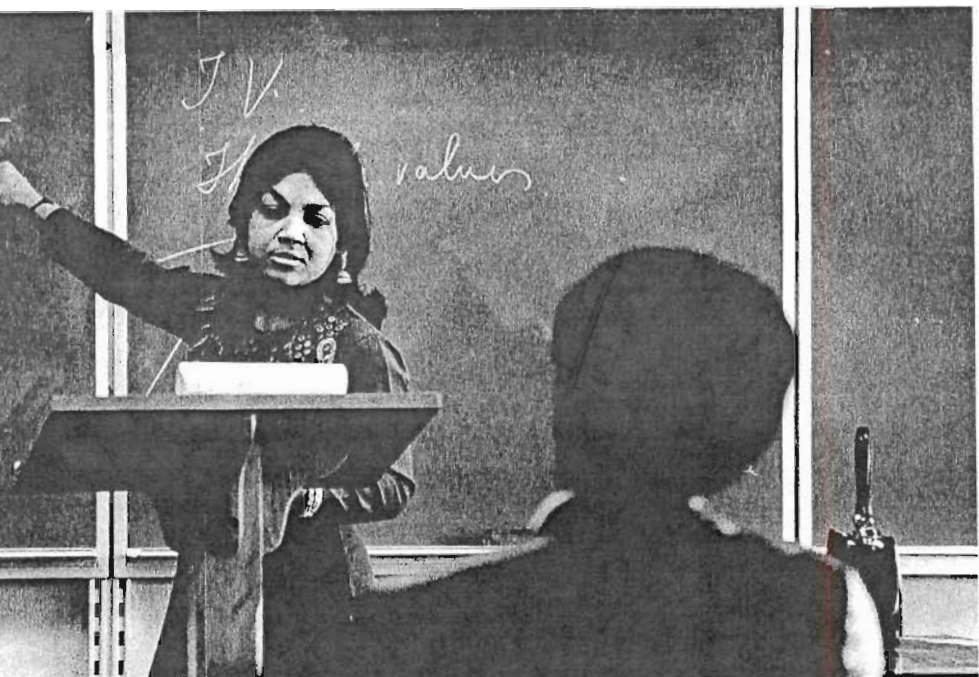
## CURRICULUM IN SOCIAL WELFARE BACHELOR OF ARTS

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
Foreign Language	4	4	4
History 121-2-3	3	3	3
Physical Ed. 11-12-13	1	1	1
or			
Air Science I (M)	1	1	1
Orientation	1		
Music 131		3	
Sociology 211			3
	<u>16</u>	<u>17</u>	<u>17</u>

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Economics 211-12-13	3	3	3
Foreign Language	3	3	3
Psychology 222-311	3	3	
Social Welfare 341	3		
Psychology 321			3
Social Welfare 342 or			
482H		3	
Social Welfare 351-2-3	4	4	4
Political Science 421	3		
Philosophy 323		3	
Sociology 221			3
Sociology 322			3
	<u>19</u>	<u>19</u>	<u>19</u>

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 211-12-13	3	3	3
Foreign Language	3	3	3
Biology 101-2-3	4	4	4
Political Science			
221-312	3	3	
Free Electives			3
Psychology 221	3		
Sociology 212-213		3	3
Physical Ed. 20's-5C	1	1	1
or			
Air Science II (M)	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Psychology 351			5
Sociology 351	3		
Sociology 461	3		
Sociology 303	3		
Sociology 412, 451		3	3
Social Welfare 401-2-3	3	3	3
Social Welfare 405-6-7	2	2	2
Social Welfare Electives		3	3
Art 411	3		
Social Welfare 450		3	
	<u>17</u>	<u>14</u>	<u>16</u>



## Department of Speech and Drama

THOMAS E. POAG, Ph.D., Head

### SPEECH—

The Departmental program in Speech and Drama is divided into two areas of concentration: (1) Speech and Drama and (2) Speech Pathology and Audiology. Courses in Radio and Television are offered as electives. Students are free to major or minor in Speech and Drama and to major in Speech Pathology and Audiology. The purposes of the Department are to train teachers in the areas of Speech and Drama for public schools, colleges, and universities; to train technicians for the educational community and professional theatre, and for radio and television. Students are trained in Speech Pathology and Audiology to become teachers, clinicians and therapists. The Department offers service courses for non-majors who are interested in speech improvement, and dramatics as a cultural or leisure time activity.

Curricula in Speech and Drama meet the requirements for teacher education and the needs of graduate students. Forty-eight hours of courses in Speech, Drama, and the related subjects or a combination of Speech and Drama courses are required for a major; and 36 hours for a minor. A minimum of 198 quarter hours are required for graduation.

A major in the Department of Speech and Drama for the Bachelor of Arts degree must complete 48 hours of course work in the areas of Speech or Drama and 66 hours in the General Education Core, plus 18-27 hours in Modern Foreign Languages if he plans to teach. All Speech and Drama majors are encouraged to minor in Education—39 hours; and English, 36 hours.

A major in the Department of Speech and Drama for the Bachelor of Science degree must complete 48 hours or more of course work in the areas of Speech or Drama, plus 60 to 66 hours in the General Education Core; 39 hours in Education; and 41 hours in other courses and electives. All majors for this degree are encouraged to minor in English, 36 hours.

Students concentrating in Speech Pathology are required to complete 48 hours or more in Speech Pathology and Audiology; six hours in Special Education; and six hours or more in Psychology and 200 clinical clock hours.

For a minor in the Department of Speech and Drama the student must complete 36 hours. The courses are as follows:

Drama 111, 112, 113 (1); Speech 201, 202, 203 (9); Speech 211 and 212 (6); Speech 301, 302, 303, (9); Drama 421, 422, 423 (9).

## BACHELOR OF SCIENCE

### CURRICULUM IN SPEECH PATHOLOGY AND AUDIOLOGY

#### (Teacher Education)

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
Art 133	3		
Health 151			3
Speech 201		3	
Music 131		3	
Hist 201 & 202 &			
Pol Sci 203	3	3	3
Biol. 101-2-3	4	4	4
Air. Sci. 151-2-3(M)			
or P.E. 11-12-13	1	1	1
Orientation	1		
Speech 213			3
	15	17	17

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Soc. Studies 114	3		
Math. 111-12-13	4	3	3
English 211-12-13	3	3	3
Education 201		3	
Psychology 242, 243		3	3
Air Sci. 251-52-53 (M)			
or P.E. 20-50	1	1	1
Speech 204	3		
Speech 212	3		
Speech 207		3	
Elective			6
	17	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Psychology 312			3
Philosophy 323			3
Education 462		3	
Psychology 463		3	
Sp. Educ. 465-467		3	3
Educ. 301-387	3		3
Speech 393-322	3	3	
Speech 326	3		
Speech 324-325-328	3	3	3
Speech 328-394		3	3
Speech 392	3		
Elective	3		
	18	18	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Psychology 323	3		
Psychology 431	5		
Psychology 461		3	
Speech 450		3	
Speech 371b-475	3	2	
Speech 474		2	
Speech 493b		1	
Speech 472b			12
Speech 493a	1		
Speech 493c-d-e			3
Electives	6	4	
	18	15	15

Option for students who do not plan to teach: Psychology 221, 222, 341 and 12 hours of electives in lieu of Educ. 301, 387, 462 and 472b.

## BACHELOR OF ARTS

### CURRICULUM IN SPEECH AND DRAMA

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Art 133	3		
Music 131		3	
Health 151			3
Drama 111-12-13	1	1	1
English 101-2-3	3	3	3
French, Spanish or			
German 101-2-3	4	4	4
Biology 101-2-3	4	4	4
Air Science (M) 151-152-153 or Phys. Ed.			
11-12-13	1	1	1
Orientation	1		
	17	16	16

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Education 201	3		
Social Studies 114			3
Speech 201-2	3	3	
Mod. Foreign Lang.	3	3	3
English 211-12-13	3	3	3
Speech 211-12-13	3	3	3
Psychology 242-43		3	3
Air Science (M) 251-252-253 or Phys. Ed.			
20's to 50's	1	1	1
Hist. 201-202 &			
Pol. Sci. 203	3	3	3
	19	19	19

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Speech 203			3
Drama 341-372	3	3	
Drama 301-2-3	3	3	3
Math. 111-12-13	4	3	3
Education 301-387	3	3	
Psychology 312			3
English	3	3	
Psychology 463			3
Philosophy 323	3		
	19	15	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Speech 371	3		
Philosophy 323		3	
Drama 411-12	3	3	
Drama 421-22-23	3	6	
Speech 450	3		
Education 471-2			15
Education 462	3		
Speech 361		3	
	15	15	15



## BACHELOR OF SCIENCE

### CURRICULUM IN SPEECH AND DRAMA

Freshman Year	Quarter		
	I	II	III
Name of Course	I	II	III
Drama 111-12-13	1	1	1
Art 133	3		
Health 151			3
English 101-2-3	3	3	3
Hist 201, 202 & Pol Sci 203	3	3	3
Biology 101-2-3	4	4	4
Phys. Ed. 11-12-13 or Air Science (M) 151-152-153	1	1	1
History 201-2		3	3
Orientation	1		
	16	15	18

Sophomore Year	Quarter		
	I	II	III
Name of Course	I	II	III
Speech 201-2	3	3	
Social Studies 114			3
Speech 211-12-13	3	3	3
Math. 111-12-13	4	3	3
English 211-12-13	3	3	3
Education 201	3		
Psychology 242-43		3	3
Phys. Ed. 20's to 50's or Air Science (M) 251-252-253	1	1	1
History 203	3		
	19	16	16

Junior Year	Quarter		
	I	II	III
Name of Course	I	II	III
Speech 301-2-3	3	3	3
Speech 421-22-23	3	3	3
Education 301-387	3	3	
Psychology 312			3
Speech 341-42	3	3	
Health 212			3
Speech 203	3		
Education 462		3	
Psychology 463			3
Speech 371			3
Electives	3	3	
	18	18	18

Senior Year	Quarter		
	I	II	III
Name of Course	I	II	III
Speech 450	3		
Speech 381	3		
English 411	3		
Speech 461		3	
English	3	6	
Education 471-2			15
Phil. 323		3	
Speech 351	3		
Speech 311		3	
	15	15	15

## THE HONORS PROGRAM

McDONALD WILLIAMS, Ph.D., Director

Beginning with the 1964-1965 academic year the University offered a program for its freshmen with exceptional abilities. The purposes of the program are:

1. To stimulate students of exceptional ability and enable them to perform in keeping with their potential.
2. To give proper guidance to students with exceptional ability.
3. To develop an academic climate that will stimulate all students at the University to perform to their intellectual capacity.

Based upon their composite and English scores on the American College Test (ACT) and/or their high school rank, freshmen are invited to participate in the Honors program. Honors courses for freshmen are: Art, Biology, English, History, Music, Orientation, Social Studies, and Colloquium.

Sophomore-level honors courses are: Foundations of Education, History, Human Development, Psychology of Learning, World Literature, and Colloquium.

Junior-level honors courses are Curriculum Development and Colloquium.

Senior-level honors courses are Colloquium and Senior Thesis.

Students who are not invited to participate in the Honors Program as entering freshmen may be admitted later by recommendation of a university faculty member. Following receipt of such recommendations, the Honors Office invites all students so nominated to appear for an interview. Each student is ordinarily interviewed by two faculty members, whose evaluation of him, together with his grade point average, will determine his acceptance.

When a student enters the Honors Program, he is advised by his major department and by the Honors Office. During his four years at the University, the Honors student will take courses both from the regular curriculum and from the offerings of the

Honors Program. Ordinarily, the freshman and sophomore students will take two Honors courses each quarter, with Honors Freshman Composition and Honors World Literature being required. Further requirements are the Colloquia—Freshman, Sophomore, Junior, and Senior. The Freshman and Sophomore Colloquia replace the third-quarter courses in freshman and sophomore English, and it is expected that the Junior and Senior Colloquia will fit into the student's schedule as "electives." The Honors Program does not require additional courses beyond those required of other students. Students admitted to the Program later than the first quarter of their freshman year will be exempted from whatever requirements are expected prior to their entrance.

To remain in the Program, a student must maintain a minimum cumulative grade point average of 3.0, based on all course work. If a student's quarter grade average falls below 3.0, he will be placed on probation the following quarter, during which quarter he will be expected to raise his average. Students will be asked to withdraw if their cumulative average or their quarter grade average for two consecutive quarters has dropped below 3.0. If a student later raises his average, he may be re-admitted. The initiative, however must be taken by the student. A student may withdraw from the Program at any time, but he should first notify the Honors Office.

Also important in the retention of a student is the quarterly evaluation of him by his Honors teachers, who determine whether he is of Honors calibre and whether he is working up to his potential.

Finally, each Honors student is expected to maintain the highest standards of personal conduct.

With the exception of the Honors Colloquia, grades awarded in Honors courses coincide with those given for courses in the regular curriculum. In the Colloquia, however, the grades are:

H Honor,	4 quality points per quarter hour
P Passing,	3 quality points per quarter hour
NC No Credit.	0 quality points

Students who complete the requirements of the Honors Program will, at commencement, be graduated with "University Honors."

These requirements include:

1. Taking a total of 36 hours of Honors work, or 27 hours if the student enters during his sophomore year.
2. Writing and defending a senior thesis. The student will be allowed freedom of choice in selecting a topic for his Honors thesis. The topic may, for example, be related to his major field of interest or to a colloquium. His choice must, however, be approved by the Honors Advisory Committee. In so far as possible, advisers for the Honors thesis will be members of the Honors faculty. The student will select his topic in the Fall of his senior year, complete his thesis by the beginning of the Spring Quarter, and defend it before the Honors Advisory Committee.
3. Attaining a cumulative average of at least 3.25.

#### CURRICULUM FOR HONORS PROGRAM

Freshman Year				Sophomore Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Art 182H .....		3		Education 281H .....	3		
Biology 181-2-3H .....	5	5	5	English 281-2H .....	3	3	
English 181-2H .....	3	3		English 283H			
English 183H				(Colloquium) .....			3
(Colloquium) .....			3	History 281-2-3H .....	3	3	3
History 181-2-3H .....	3	3	3	Psychology 282-3H .....		3	3
Music 181H .....	3						
Orientation 181H .....	1						
Social Studies 181-2-3H .....	3	3	3				
	18	17	14		9	9	9
Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Education 387H .....		3		Senior Thesis 489H .....	3		
Colloquium 382H .....		3		Colloquium 481H .....	3		
				Social Welfare 482H .....			3
		6			6		3

## BIOLOGICAL SCIENCES

### Biology

**101-2-3. Fundamentals of Biology.** (12) Studies of biological principles as illustrated by types of organisms, their activities and life processes with emphasis on man. Biology 101 must precede Biology 102 or 103. Three lectures and one laboratory period.

**111-12-13. Principles of Animal Biology.** (15) This course is designed to provide a sound understanding of structure, function and life characteristics of animals. This course should be taken in sequence, Three lectures and two laboratory periods.

**181-2-3H, Honors Animal Biology.** (15) A course designed for students of exceptional caliber. Emphasis is placed on individual critical and original thinking based on recent research findings dealing with animal biologic principles. As such the student will be expected to do extensive reading of literature, make special reports, and participate in guided discussions. Laboratory problems are so designed as to challenge the ingenuity and creativity of the student. Three lectures and two laboratory periods.

**251. Sophomore Biology Review.** No credit. Required of all third quarter sophomores. This course involves a comprehensive review of basic biologic principles covered the first two years in the major field. It will terminate in a comprehensive examination which must be passed prior to selecting the specific major.

**311. Principles of Genetics.** (4) An introduction of genetics, including the laws of heredity, the role of heredity in developmental physiology, and the relation between heredity and evolution. Prerequisites: Biology 111-12-13 and Botany 112-13 or equivalents. Three lectures and two laboratory periods.

**411. Advanced Genetics.** (4) The main areas considered are the nature of the gene, the principles governing genic mutation and change in chromosomal structure, and the results of the operation of these principles. Prerequisites: Biology 111-12-13, Botany 112-13 and Biology 311. Three lectures and two laboratory periods.

**441. Histology and Microtechnique.** (4) Microscopic anatomy of the organ systems and selected tissues of vertebrates and plants. Theory and methods of preparing tissues for microscopical examination. One lecture and three laboratory periods.

**451. Senior Biology Review.** No credit. Required of all third quarter seniors. This course involves a comprehensive review of biological principles, with emphasis in the major subject, culminating in a comprehensive examination. Required in lieu of the Senior Project.

**452. Junior Honor's Research.** (3) Open to seniors of outstanding attainment who have demonstrated high achievement in their major field. It offers opportunity to do individual research under the direction of a member of the Departmental Faculty.

**473. Principles of Ecology.** (4) Fundamental ecological principles, with special reference to levels of organization, population, structural adaptations, functional adjustments and other factors affecting the distribution of organisms. Prerequisites: Biology 111-12-13 and Botany 112-13. Three one hour lectures and one 4 hour laboratory per week.

**497-8-9. Biology Seminar.** (3) Current Problems in Biology. A minimum of two quarters required of all seniors in the Department. Meets weekly during each quarter of the regular school year.

### Botany

**112-3. General Botany.** (10) Deals with a study of the anatomy, physiology and taxonomy of plants. Three lectures and two laboratory periods.

**313. Plant Morphology.** (4) Consideration of the structure, embryology and phylogeny of higher vascular plants. Prerequisite: Botany 113. Three lectures and two laboratory periods.

**411. Introductory Plant Physiology.** (4) Consideration of the functions of digestion, mineral, nutrition, growth, photosynthesis, respiration, translocation, photoperiodism, plant hormones, transpiration and water relations as occurring in a typical green plant. Prerequisites: Botany 113 and General Chemistry 111-12-13 or equivalents. One lecture and three laboratory periods.

**453. Field Botany.** (4) A course designed to acquaint the student with basic principles of plant classification and identification, the use of manuals with reference made to the families, genera and species of the local flora. Prerequisites: Botany 112-13 or equivalent. One lecture and three laboratory periods.

### Microbiology

**240. Principles of General Bacteriology.** (5) This course is concerned with the isolation, identification, culture, nutrition, sterilization and chemotherapeutic procedures employed in studying bacteria. Prerequisites: 1 year Animal Biology (111-12-13) and 1 year General Chemistry (111-12-13) or equivalents. Three lectures and two laboratory periods.



**241. General Bacteriology.** (5) Consideration of identification, culture, sterilization and disinfectant procedures employed in studying certain microorganisms. Open to majors in Home Economics and Health and Physical Education. Prerequisite: Biology 101 or Chemistry 111. Three lectures and two laboratory periods.

**312. Introduction to Microbial Physiology.** (4) This course outlines some of the salient features in the physiology of microorganisms. Selected examples of the metabolism of carbohydrates, lipids and nitrogen containing compounds will be considered as a basis for further understanding of biologic phenomena. Prerequisites: Microbiology 240 and Organic Chemistry, concurrently, or equivalents. Three lectures and two laboratory periods.

**412. Pathogenic Microorganisms.** (4) This course surveys some of the important features of host-parasite interaction. Characteristics of the organism, host hypersensitivity, natural and acquired immunity will be considered as a contributing factor towards this interaction. Modern preventive methods will be emphasized. Prerequisite: Microbiology 240. Three lectures and two laboratory periods.

**413. Immunology and Serology.** (4) Theories of immunity, training in serological methods and procedures for immunization. Prerequisites: Microbiology 240 and 412. Three lectures and two laboratory periods.

**463. Virology.** (4) Nature of viruses and viral diseases; diagnostic procedures; identification, cultivation, purification and preservation of viruses. Preparation and use of vaccines and serum. Prerequisites: Microbiology 240 and 412. Three lectures and two laboratory periods.

### **Natural Science**

**121-2-3. Introduction to Natural Science.** (12) Basic principles from the physical and biological sciences, the place of science in human culture, and for the use of the scientific method in problem solving developed through experiences in the classroom, field, and laboratory. The first two quarters are devoted to selected experiences in the areas of astronomy, meteorology, geology, physics, and chemistry. The third quarter deals with biological phenomena. Three lectures and one two-hour laboratory period.

**121E-122E-123E. Biological and Physical Science.** (12) A course designed to present an in-depth treatment of selected topics in the physical sciences (primarily physics) and the biological sciences.

The primary purpose of the course is to help students gain a broad outlook on the meaning of science and some of the concepts underlying its various disciplines.

The students will explore such topics as: The Nature of Science, Light, Conservation, Structure of Matter, The Cell, Metabolism, Reproduction, Growth and Development, and Genetics. The course is laboratory-centered. (Orientation is included).

### **Zoology**

**202-3. Human Anatomy and Physiology.** (10) The fundamentals of the structure, function and organization of the organ-systems of man. These courses must be taken in sequence. Open to majors in Home Economics and Health and Physical Education, and Nursing Education. Prerequisite: Biology 101 or Chemistry 111. Three lectures and two laboratory periods.

**332-3. Comparative Anatomy.** (8) The comparative anatomy and evolution of the organ-systems of chordate animals. These two courses must be taken in sequence. Prerequisites: Biology 111-12-13 or equivalents. Three lectures and two laboratory periods.

**401. Invertebrate Zoology.** (4) A study of the morphology, physiology, taxonomy and life histories of the invertebrates. Emphasis is placed on the systematic developments of invertebrate types. Prerequisites: Biology 111-12-13 or equivalents. Three lectures and two laboratory periods.

**402-3. Mammalian Physiology.** (8) Consideration of the dynamic interactions and integrations of mammalian organ-systems. Special emphasis is placed upon recent advances in methodology and new concepts in physiology and contributing sciences. Prerequisites: Biology 111-12-13 and Chemistry 111-12-13 or equivalent. Three lectures and two laboratory periods.

**432. Embryology.** (4) A general consideration of gametogenesis, fertilization and cleavage in animals and the early development of echinoderms, protochordates and selected vertebrates, with emphasis on early development of the chick. Prerequisites: Zoology 332-3 are strongly recommended. Three lectures and two laboratory periods.

**441. Introduction to Parasitology.** (4) A survey of the animal parasites of man and animals. Special attention is given to the parasitic protozoa, the helminths, and the arthropods. Consideration is also given to the spirochaetes, certain viral diseases, the rickettsia and related organisms. Prerequisite: Biology 111-12-13 or equivalent. Three lectures and two laboratory periods.

**461. Endocrinology.** (4) The function of vertebrate hormones with emphasis on those concerned in the physiology of reproduction. Techniques used in small animal surgery in endocrine research. Prerequisites: Zoology 432. Two lectures and two laboratory periods.

## **CHEMISTRY**

**100. Basic Chemistry.** (3) Study of the fundamentals of chemistry and their application to some problems of a biological nature. Representative topics include: chemical measurements; states of matter; solutions; carbohydrates; fats; proteins and vitamins; chemistry of digestion. Offered for non-science majors only.

**111-2. General Chemistry.** (8) This course is an elementary study of the fundamental laws and theories of chemistry and of the descriptive chemistry of important elements and compounds. Required of majors in Chemistry, Biology, Engineering, Pre-medicine, Pre-dentistry, Home Economics, Agriculture, Health and Pre-nursing. Two lectures, one recitation, and two two-hour laboratory periods per week. Pre-requisite: Passing of the placement test or Mathematics 100.

**113. Qualitative Analysis (Inorganic)** (4) Pre-requisites: Chemistry 111-2, Mathematics 111 or 161. A study of the principles underlying ionic equilibria in solutions and a laboratory study of the separation and identification of the common cations and anions. Two lectures and two three-hour laboratory periods per week.

**211-2-3. Elementary Analytical Chemistry.** (12) Chemistry 111-2-3 and Mathematics 161-2-3 are prerequisites. This course includes the theories and laboratory practice in both qualitative and quantitative analysis. The quantitative analysis includes both volumetric and gravimetric analysis, together with related stoichiometric problems. Three lectures and two three-hour laboratory periods per week.

**311-2-3. Organic Chemistry.** (12) Chemistry 111-2-3 are pre-requisites, with a minimum grade of "C" in each course. A systematic study of the source, physical properties, and chemical behavior of aliphatic, aromatic, and heterocyclic compounds of carbon. Three lectures and two three-hour laboratory periods.

**361. Organic Chemistry Survey.** (4) Chemistry 111-2-3 are prerequisites. Important classes of organic compounds are presented. Emphasis is placed upon the study of hydrocarbons and their principal derivatives: carbohydrates, proteins, fats and oils, vitamins, and dyes. Designed for majors in Agriculture, Home Economics, and Health. Three lectures and two two-hour laboratory periods.

**400. Senior Project.** (3) Experimentation and writing. This course is required of prospective graduating seniors. Students should enroll in this course at least two quarters prior to expected date of graduation. Other regulations pertaining to this subject found elsewhere in this catalog, should be observed. Minimum of eight hours per week.

**401. Chemical Bibliography.** (3) Prerequisites: Chemistry 211-2-3 and 311-2-3, and a reading knowledge of German. A study of how to use the chemical journals, reference books, and other sources of chemical information. A systematic search in the chemical literature for information on several compounds and topics will be included. Two conferences a week.

**431-2. Analytical Chemistry.** (6) Chemistry 211-2-3, 311-2-3, 481 and Physics 221-2-3 are pre-requisites. Instrumental methods of analysis. Open to senior chemistry majors and graduate students. This course trains students in the theory and practice of instrumental methods as applied to quantitative analysis. Potentiometric and conductometric titrations, measurement of pH, and analyses using refractometers, colorimeters, spectrophotometers, and Geiger Counters will be performed. Two lectures and two three-hour laboratory periods each week.

**462-3. Organic Qualitative Analysis.** (6) Chemistry 211-2-3, 311-2-3, and 404 are prerequisites. A systematic study of the solubility and class reactions of the principal classes of organic compounds. It includes also identification of pure organic compounds and mixtures. Two lectures and two three-hour laboratory periods.

**481-2-3. Physical Chemistry.** (12) Prerequisites: Chemistry 211-2-3, Mathematics 261-2-3, and Physics 231-2-3; or permission of instructor. This course is devoted to a study of the fundamental theories and laws governing both physical and chemical changes and covers the properties of gases, liquids, solids, thermodynamics, solutions chemical equilibria, reaction rates, and electrochemistry. Three lectures and two three-hour laboratory periods.

**491-2-3. Chemistry Seminar.** (3) Required of all Seniors.

**421-2. Inorganic Chemistry.** (6) Chemistry 211-2-3 are prerequisites.

## ENGLISH

### Undergraduate

**101. Freshman English.** (3) Writing with emphasis on paragraph development, structure, style, organization, and the transition of ideas. Attention is given to grammar and mechanics.

**102. Freshman English.** (3) A continuation of English 101, with emphasis on the principles of clear correct and effective expository writing through the use of illustrative essays. Poetry is studied for critical analysis and explication.

**103. Freshman English.** (3) A continuation of English 102, with emphasis on writing the research paper.

Note: English 101, 102, 103 are required in numerical order of all freshmen. Only one of these courses may be pursued during a given quarter or summer term.

On the basis of score results on the prescribed reading and English tests, students are classified as either: (a) Freshmen who score at the level of success and are enrolled in English 101; (b) Freshmen who score at a level below the accepted norm and are enrolled in English 101 and Laboratory. Students are required to meet both theory and laboratory requirements before receiving a final grade.

**101-2-3E. Ideas and Their Expression.** (12) The basic aims of this course are (1) to improve student writing and (2) to develop in the students both interest and sufficient literary sensitivity to enable them to read with understanding and pleasure.

The students will explore several themes: "Choice and Temptation," "Responsibility," "Power," "Love," and "Alienation" as they are developed in literature with examples drawn from contemporary authors like James Baldwin, Eugene O'Neill, Ernest Hemingway and E. E. Cummings.

Some time is also devoted to other forms of artistic expression with emphasis on class discussion rather than lecture. The flexible structure is determined by student interest. (General Orientation is included).

**181H-2-3. Honors Freshman English.** (9) An Honors Course in Freshman English designed for student with special competence in English to work at an advanced level. Class enrollment is limited and restricted to students notified as having qualified for the English Honors section.

**211-212-213. World Literature.** (9) A course embracing the study of the principal works, by types, of world literature from the ancients to the contemporary American, British, French, German, Spanish, and Italian writers. Special attention given to religious and philosophical theories in these writings and their applications to modern life and thought.

**211E-212E-213E. Ideas and Their Expression—II.** (9) A study of literature and the Arts. The primary objective is to develop within the students a critical appreciation for literature and the other art forms. A secondary objective is the continuous development of the communication skills. Prerequisite: English 101E-102E-103E.

**221. Introduction to Literature.** (3) A course designed to acquaint the English major with the techniques of the short story, the nature of dramatic art, and the forms of poetry, with emphasis on poetry. Prerequisite: English 101-102-103.

**222-223. Survey of English Literature.** (6) Lectures, reports, readings, and classroom discussion of major English works from the Anglo-Saxon Period to the Twentieth Century. (Three courses were offered as English 202-203 during 1950-51.)

**261. Children's Literature.** (3) (Offered also as Education). Offers prospective teachers of the primary grades an opportunity to become familiar with the field of literature suited to the tastes of children. Principles that underlie selection of children's literature considered.

**271. Advanced Composition.** (3) A course concerned with the application of the skills of communication. Available to students who desire training beyond the 9 required hours in Freshman English.

**281H-282H-283H. Honors World Literature.** (9) An honors course in world literature designed for students with special competence in English to work at an advanced level.

**301-302-303. Elementary Journalism.** (9) A practical course in English composition with emphasis upon the construction and function of daily and weekly newspapers, community publicity, school publications, and news stories.

**311. Literature of the Romantic Movement.** (3) Study of representative British selections from 1798 to 1832. Attention given to both poetry and prose.

**312. Prose of the Victorian Age.** (3) An intensive study of nonfictional prose writers such as Carlyle, Mill, Arnold, Newman, and Ruskin, with additional assignments in the works of the major novelists such as Dickens, Thackeray, and Eliot.



- 313. Poetry of the Victorian Age.** (3) A study of the major and minor poets, with emphasis on Tennyson, Browning, Arnold, Rossetti, Morris and Swinburne.
- 321-322.** (6) A course in business correspondence emphasizing the different roles of communication in operating management. One of the following courses is a prerequisite for English 322, English 271-272-273, or 321.
- 323. Expository Writing.** (3) Training in preparation of the research report and other types of expository writing, with emphasis on the collection of material, analysis, organization, and arrangement.
- 331. Literature of the Sixteenth Century.** (3) Study of representative British selections from 1500 to 1600. A consideration of the non-dramatic literature of the century; Lyly, Peele, Greene, Linacre, More, Colet, and others.
- 332. Literature of the Seventeenth Century.** (3) Study of representative British selections from 1600 to 1700. The poetry and prose of the period in relation to streams of thought of the century as revealed in the writings of the metaphysical, cavalier, puritan, and restoration authors.
- 333. Literature of the Eighteenth Century.** (3) Study of representative British selections from the ages of Pope (1700-1844) and Johnson (1744-1788.)
- 324. Technical Report Writing.** (3) The fundamentals of written reports required in modern engineering, business and science. Emphasis on organization planning and arrangement of material to include: grammar, sentence structure, and paragraphing. The supplementary use of graphs, charts, sketches, diagrams, drawings, tables and other visual aids to present ideas clearly and concisely is encouraged. Form and content of technical literature available in the library are studied. Prerequisite: English 103.
- 361-362-363. American Literature.** (9) American Literature from Colonial times to the Civil War; American Literature from the Civil War till 1900; American Literature of the twentieth century. Required of all majors in the junior year.
- 371. Methods of Teaching High School English.** (3) (Offered as Education.) A methods course in secondary school English. Required of majors. Prerequisite: Thirty-six hours of English must be taken during residence at the University.
- 373. The Contemporary Black Novelist.** (3) A study of novelists such as James Baldwin, Ralph Ellison, Margaret Walker, John Killens, Frank Yerby, in terms of literary merit and social milieu.
- 393. Literature of Negro Life.** (3) A study of American Literature dealing primarily with Negro life.
- 400. Senior Seminar.** (3) A survey of current problems in English. Includes group discussions, lectures, and short papers on topics selected according to student interests and needs. Three class meetings per week. Taken in lieu of Senior Project. Prerequisite: Senior standing.
- 401. The Metaphysicals.** (3) A study of the works of John Donne, George Herbert, Richard Crenshaw, Henry Vaughn and other followers of the Donnesque school.
- 411. Shakespeare.** (3) Study of the principal plays of Shakespeare.
- 412.** (3) A continuation of the study of Shakespeare, with emphasis upon the cultural background of the Elizabethan Period.
- 421. The English Novel.** (3) A study of selected English novel with attention to the social background in which they were written.
- 422. The American Novel.** (3) A study of selected American novels, with attention to the social background in which they were written.
- 423. The Continental Novel.** (3) A study of selected Continental novels with attention to the social backgrounds in which they were written.
- 431. Milton and Bunyan.** (3) Study of Milton's *Paradise Lost*, *Samson Agonistes*, *Paradise Regained*, the minor poems, and the more important prose tracts; and of Bunyan's *Pilgrim's Progress*.
- 450. Senior Project.** (3)
- 451. History of the English Language.** (3) A study of the development of the English language from the beginnings to modern times. Some attention is given to phonetics and to the elementary principles of linguistics. Required of all English majors. Prerequisite: Eighteen hours of English.
- 452. Chaucer.** (3) A close study of the *Canterbury Tales* and *Troilus and Criseyde*, with emphasis on Chaucer as a literary artist.

**453. Current English.** (3) Advanced grammar and modern usage. Some attention is given to semantics. Prerequisite: Eighteen hours of English.

**454. Modern English Grammar.** (3) Introduction to modern linguistic science and application to the "newer" theories of grammar, application of structural linguistics to reading, writing, speaking, and listening.

**472. Grammar and Language Institute.** An institute designed to guide participants in acquiring knowledge in and experience with applying recent linguistic findings concerning the nature of language and the communication process. Special attention will be given to a new development in English grammar and their implications for instruction in the language arts.

**473. English Education.** (3) Designed primarily for the in-service teacher. Review of recent research studies chiefly in composition, grammar, and literature and the possible implications for re-examination of methodology of English teaching.

Note: During the quarter a student takes Student Teaching 472, no additional courses may be taken.

A student must have had all courses in Education and History 121-2-3 or 181-2-3, History 201-2-3, or 281-2-3; History 301-2-3; 341 or 342; and History 371 and 491 or 492 prior to taking Student Teaching.

## **COURSES IN HISTORY**

### **Undergraduates**

**121-2-3. The Growth of Civilization.** (9) A study of the contribution that all races and nations have made to our present civilization. Assigned readings, discussions, reports, and quizzes will comprise the type of work in this course. (Required of all Freshmen).

**201-2-3. American History.** (9) History 201: An investigation of European culture and influence upon the American Colonies from 1492 to 1789. History 202: The beginning of our National State from 1789 to 1877. History 203: Post-Reconstruction Problems, the emergence of industrial life and the influence of technology in American civilization, the dominance of the Republican Party in National politics; rise of organized labor, urbanization, the rise of the Negro Rights Movement, American Imperialism, the First and Second World War Problems of the United States and the United Nations in the Post World War II World.

**181-H. Honors Growth of Civilization.** The Course of Civilizations: Classical Age of Greece and Rome: Fertile Crescent, Egypt, India. An intensive investigation of the development of man from the dawn of history to the modern period. Advanced scholastic students (top percentile) will engage in intensive and extensive study of the social, intellectual, economic, geographical, and political developments of man to the classical civilizations of Greece and Rome.

**182-H. Honors Growth of Civilization.** The Course of Civilizations: The Early Middle Ages, Later Middle Ages—Man's development in Asia, Europe, Mediterranean, Africa and the Middle East and the Western Hemisphere.

**183-H. Honors Growth of Civilization.** The Course of Civilizations: Renaissance and Reformation, Absolutism, Rationalism, Commercialism, Nationalism, Industrialism, Democracy and the Age of Total War and Revolution to the Present.

**281, 282, 283-H. Honors American History.** (9) An intensive and extensive study of American history from the earliest stages to the present. Great emphasis is placed upon oral and written exercises, directed research and seminar format. It is only open to students with recognized high potential and academic rating. The course is in lieu of History 201, 202, and 203 for those qualified.

**301. Foundations of Modern Europe.** (3) This course deals with the important phases of the Protestant Revolt; the economic, political, and the religious background; the Lutheran and Reform Movements, with special reference to their political and theological trends; the early expansion of Europe. (Period 1500 to 1715.)

**302. Foundations of Modern Europe.** (3) A study of the rise of Russia, Prussia and Austria; the decline of Sweden and Poland; the Intellectual Revolution; the continued expansion of Europe. Most emphasis will be placed upon the French Revolution; upon its causes; personalities and its constructive features; the career of Napoleon. (Period 1715-1848.)

**303. Foundations of Modern Europe.** (3) A study of European History from 1848-1920. The beginning of the Industrial and Social Revolution of the nineteenth century; Vienna Peace Settlement; political reaction and revolution; the creation of Germany and Italy; the struggle for democracy and social reform in various European countries.

**331. American Colonial History.** (3) The economic, social, religious, cultural, and political development of America from 1607-1789.

- 341-42. History of Tennessee.** (6) A course in the cultural, economic, and political development of the State of Tennessee. Emphasis will be placed on the part the Negro has played.
- 361. (Formerly 333). Constitutional History of the United States to 1787.** (3) The origin, development and operation of the Constitution of the United States with attention to the factors which have influenced constitutional changes and the historic cases in which the provisions and principles of the Constitution have been interpreted and applied by the courts. Prerequisite: History 201-2-3 or Political Science 221-2-3.
- 362. Constitutional History of the United States 1789-1860.** (3) Continuation of History 361.
- 363. Constitutional History of the United States 1860 to Present.** (3) Continuation of History 362.
- 371. The Teaching of History, Political Science and Geography.** (3) The theory materials for the teaching of history and political science will be reviewed. Open to majors in the department who plan to teach. Assigned readings, personal investigations, field work and demonstrations in class.
- 372. (403) Economic History of the United States 1603-1860.** (3) A study of the economic development of the United States from the colonial period to the present with particular emphasis on the influence of economic forces in the shaping of social and political growth and change. Prerequisite: History 201-2-3.
- 373. Economic History of the United States 1860 to Present.** (3) Continuation of History 372.
- 381-2. (312) Civil War and Reconstruction.** (6) The study of the factors leading to the secession and an analysis of the problems of reconstruction.
- 385. North Africa.** (3) A history of the Near or Middle East, and North Africa to the Sahara to 1600.
- 386. Africa—(1610-1914).** (3) A history of Africa from 1600 to 1914 emphasis on the Sub-Saharan and Tropical Region.
- 387. Africa—(1915-1970).** (3) A history of Africa from 1914 to Present emphasis on South West, Central, East Africa, and South Africa Republic and Trust Territories.
- 391-2-3. Russian History.** (9) The background causes and events deals with the emergence of Russia from barbarism to a National State and her attempts to become a Westernized nation. A study of Russia's political development will be made from Alexander I to the present day. The many changes incident to her rise from a feudal state to a dynamic revolutionary state will be considered. Special emphasis will be laid upon the impact of successive revolutionary precursor of Marxian Socialism. Russia's historic mission in foreign affairs will be employed as a guide toward an understanding of her present-day aims.
- 401-2-3. Contemporary World History.** (9) The background, causes and events of the First World War; the Paris Peace Conference and its later problems; the League of Nations; the rise of Communism, Fascism, Nazism; development in totalitarian states, education, art, literature and music and religion; the East in Revolt; and finally, the second world war and present issues.
- 421-2-3. (422) Diplomatic History of the United States.** (9) A survey of the foreign relations of the United States, with special reference to the establishment. (See Pol. Science 453-4-5.)
- 433-4. The Development of 19th Century Empires 1800-1930 (formerly—The British Empire).** alternate years 1965-66. (6) A study of the rise and expansion of the protest and independence movement under the British, French, Dutch, Belgian, German, and Italian Empire system in colonial areas of the nonwestern world—Africa, South East and West Asia, India, and the Middle East commencing with the 1880's to 1930. The imperialistic struggle for, and in these areas which led to the partition of Africa, the Open Door Policy in China and the development of the white man's burden are given special consideration. Also events which led to World War I, its settlement and the formation of the League of Nations, to the eve of the Great World Wide Depression will be investigated.
- 442-3. Renaissance and Reformation.** (6) The first quarter of this course will be a survey of Europe between 1250 and 1600. Special attention will be given, to the Renaissance, the artistic, literary, political, and commercial growth. During the second quarter special emphasis will be given the Protestant Reformation and the Catholic Counter Reformation.
- 450. History.** (3) The writing of senior projects in history.
- 451. Latin American History.** (3) An introduction and general history of the founding of the Spanish and Portuguese Colonial Empires in the Western World and Southern Hemisphere 1450 to 1820—Spanish explorations in Caribbean areas, Gulf states to California, Mexico, Central and South America.



**452. Latin American History.** (3) Revolutions, revolts, and reactions to French rule 1790-1814 and Spanish rule 1824 and the Development of independence movements in Spanish areas; the formation of the Portuguese Empire in Brazil and the status of these states to 1920.

**453. Latin American History.** (3) The development of Modern Latin America from World War I to the present. Social, political, economic, political-geographic relations and international role, importance, challenge and problems.

**481. World Civilizations.** (3) An extensive and intensive survey of the political, economic, social, political-geographic, and international relationship of the Far East. Eastern Russia, Manchuria, Philippines, China, Japan, Viet-Nam, India, from prehistoric times to 1800.

**482. World Civilizations.** (3) A continuation of the area from 1800 to 1914.

**483. World Civilizations.** (3) A penetrating investigation of the area from 1914 to the present with special emphasis on the rise and fall of imperialism, the national independence movements, the development of two Chinas, the end of World War II settlements, the rise of new states from Western political determination, the Korean War, the Wars in former French areas and the struggle between East and West.

**491. (411) The Negro in American History.** (3) A study of the role and impact of the Negro in the exploration, discovery and early period, and the growth of American life to 1865.

**492. (411) The Negro in American History.** (3) The part played by the Negro since 1865 in the economic, political, and cultural development of the United States.

**493. The Negro in Contemporary History—1900-Present.** (3) The role, problems and challenges of the Negro since 1900 as an increasingly participating American and world citizen.

## **POLITICAL SCIENCE**

Political Science 221-2-3 are prerequisites to all other courses in the curriculum. Unless otherwise designated all courses meet three one-hour periods per week.

**221-2-3. American Government: National, State and Local.** (9) **221-2 National:** An introductory course which deals with the foundation, organization, and principles of the national government. Attention focused on the relations of the citizens to the government and the rights, duties, and obligations of citizens. **223. State and Local:** An analysis of the structure, principles and operations of the state and local units of government. Illustrative material is drawn largely from Tennessee.

**312. The Legislative Process.** (3) An examination of the structure and methods of transacting business in the American Congress and State Legislatures.

**313. Tennessee State Government.** (3) Study of Tennessee government from the functional point of view emphasizing political activities, taxation, education, social welfare and economic services of the government.

**321-2-3. Comparative European Government.** (9) An analysis of the government of selected European countries with special attention given to the development of their political systems both in theory and practice. Comparison with American institutions emphasized.

**331-2. Latin American Government.** (6) An analysis of the political and constitutional development of the Latin American states with emphasis on political concepts, policies, and international relations.

**333-4. Far Eastern Governments.** (6) Constitutional and political development in China, Japan, India, Burma, Indonesia, Malasia, the Koreans, and other countries in their general geographic area.

**341-2-3. International Relations.** (9) An examination of the present-day relations and problems among states of the world and the major factors which underlie and influence these relations. Prerequisites: Political Science 321-2-3.

**351. Government of the British Commonwealth of Nations.** (3) An examination of the government of the United Kingdom and the organization of that government as it bears upon the Commonwealth. Attention focused on an analysis of the problems of the Dominions and dependent areas with special consideration given to the problems of imperial strategy and their bearings on international policies.

**353. Government of Russia.** (3) Deals with the theory, structure, functions, operations, powers, problems and trends of the Russian government under Soviet rule. Prerequisites—P.S.—321-2-3.

**362-3. American Political Parties and Policies.** (6) The first quarter deals with an analysis of the dynamics of American politics with emphasis upon the factors influencing the formation of public opinion and the role of pressure groups. The second quarter is designed to

analyze the formation of political parties; nominations and elections; methods of representation and voting; and the importance of parties in American Government. Prerequisite: Political Science 362.

**373. Propaganda and Public Opinion.** (3) An analysis of the purposes and techniques of propaganda and the functions and expression of public opinion.

**421-2-3. Public Administration.** (9) Principles of public administration; structure and organization; financial management; administrative responsibility; and the relation between the administration and other branches of government in the United States.

**431-2-3. American Constitutional Law.** (9) Devoted to a study of the sources, principles and powers of government in the United States as embodied in the Constitution and judicial decisions in leading cases.

**441-2. International Law.** (6) A study designed to examine the rights and duties of states in their normal relations; war neutrality; intervention and blockade.

**450. Senior Project Writing.** (3)

**451-2. Government and the Economic Order.** (6) Deals with constitutional principles as they apply to the regulation of business. Emphasis placed on Federal and State regulation of public utilities, labor, securities, communications, transportation, housing, commerce and social security.

**453. Developing Political Systems.** (3) An analysis of non-western political societies, with concepts such as comparative decision-making processes, political cultures, political parties, consensus building, political, social, and economic development and modernization.

**454. African Politics.** (3) A comparative analysis of political processes in selected nations of the African continent, viewing political, social and economic problems characteristic of underdeveloped systems, with major emphasis on the post-independence period.

**455. American-Afro Diplomacy.** (3) Examines the American diplomatic relationship with African nations in the 20th century. South African, Central African Republics, East African and West African contacts, cooperation and confrontations are given intensive and extensive examination as they operate in federations and the international bodies including the United Nations.

**462-3. American Political Thought.** (6) An intensive study of main currents in American Political Thought from the Colonial Period to the present.

**465. Contemporary Political Thought.** (3) An examination of the changing political ideas since the late Nineteenth century revolutions as basis for contemporary systems of Democracy, Communism and Fascism.

## THE AREA OF GEOGRAPHY

Instruction in the area of Geography is designed to (1) provide for the student meaningful concepts concerning the earth as the home of man. (2) impart to the student a clear understanding of the relationship of the field of Geography to the other fields of knowledge. (3) prepare students for teaching careers in geographically oriented subjects; and related careers in government, industry, and business. (4) advise and prepare students for acceptance and admission in Graduate Schools.

The Department offers a minor in Geography. Such a minor curriculum consists of 27 quarter hours. Certification in teaching with a minor in geography requires 30 hours. Geography 171-2-3 are prerequisites to all geography courses on the 300-400 levels. However, geography 271-2 may be substituted for 171-2. Students preparing to teach must take the method course in the Department—Hist, POS & Geo. 371.

Of the total hours required for a minor in Geography, 12 hours must be on the 300-400 level. Besides Geography 171-2-3 and Geography 271-2-3, other courses having a strong priority in the minor curriculum of Geography include: Geography 261 (Elements of Weather), Geography 382 (Urban Geography), Geography 361 (Physical Geology), and Geography 403 (Geography of Tennessee). A student with a minor in Geography may elect to do his Senior project or research in Geography. Thereby satisfying the requirements for Geography 450 (Project Writing).

## GEOGRAPHY

**171-2-3. Elements of Geography.** A systematic approach to the study of the geographic regions of the world. Regional surveys include a special consideration of: physical character of the land, resources, economies, and cultures.

**261. Elements of Weather.** (3) A critical study of the atmosphere. This course will consider weather elements, weather observation, air masses, and their importance to weather.

**271-2. Fundamentals of Economic Geography.** (9) A survey of the elements of the human habitat with emphasis on major world resources. A consideration of the geographic facts which are important to the development of the major world industry areas.

**361. Geology.** (4) Deals with a study of the materials of the earth, the geologic processes and how they affect land forms and soil distribution. Three lectures and one laboratory or field period.

**371. United States and Canada.** (3) Recognition, analysis and interpretation of the basic physiographic features, resources and human adjustments within its several areas.

**372. Caribbean America.** (3) The northern countries of Latin America and the West Indies; their patterns of land occupancy; their commercial relation to the United States. The cultural pattern of the area will be considered (which are predominantly black people).

**373. South America.** (3) Regions and resources of South America beyond the Caribbean area with a special study of the distinctive role of each country according to its geographic significance.

**381. Europe.** (3) Regions and resources of Europe, and their relation to the development of the basic culture in different areas.

**382. Urban Geography.** (3) Deals with the spatial aspects of urban development. Primarily, the focus is upon the morphology, function, and evolution of cities. Special emphasis is placed on inner city (black) problems.

**391. Political Geography.** (3) A study of political relations, territorial aims and aspirations, boundaries and raw materials.

**401. The Middle East and India.** (3) Resources and economic activities in their regional setting; aggressive policies in territorial expansion.

**402. Geography of the South.** (3) A regional study of Southeastern United States. Surveys relating to the physical environment, human occupancy, resources, economic and urbanization are to be studied.

**403. Geography of Tennessee.** (3) A detailed study of Tennessee and its subdivision into natural and economic regions is to be emphasized.

**411. Southeastern Asia and Australia.** (3) Australia and the East Indies. A study of the physical, economic, and cultural elements visible as earth features.

**412. Africa.** (3) A study of the regions and resources of Africa with special consideration given to "Black" Africa, its development and potential.

**421. China.** (3) Regions and resources of China, with special emphasis on differences and similarities of each cultural and physical region. The placing of China as a whole in its proper continental and world framework is the final objective.

**422. The U.S.S.R.** (3) A geographical analysis of the terrain, resources and economic development of Russia and those areas in Europe and Asia largely under Russian influence.

**450. Senior Project.** (3) Directed research in a relevant problem in Geography. Special attention is given to related publications and the construction of a research design.

**462. World Climates.** (3) Designed to effect a concept of the distribution of climates over the world and the reasons for this distribution. Of major importance in this course will be: controls of climate, a climatic classification by Koppen, and the relationship of man's activities and world climates.

## **FRENCH**

**101-2-3. Elementary French.** (12) The development of the ability to understand, speak, write, and read French. French 101 is a prerequisite to 102. French 101 and 102 are prerequisites to 103.

**201-2-3. Intermediate French.** (9) Grammar review and the further development of the ability to understand, speak, write and read French. Prerequisites: French 101-2-3 or the equivalent.

**300. Pronunciation and Diction.** (3) The development of good articulatory habits through perception and imitation of French sounds with secondary emphasis on the theoretical knowledge of the phonetic symbols. Prerequisite: French 202. (Formerly French 420).

**301-2-3. Advanced Oral and Written Composition.** (9) Intensive analysis of French grammar with practical application in oral and written compositions. (Formerly French 421-2-3).

**311-2-3-4. Survey of French Literature.** (12) From its earliest beginning to the present. Prerequisite: French 203.



**311. Medieval French and the Renaissance.**

**312. The Seventeenth and Eighteenth Centuries.**

**313. The Nineteenth Century.**

**314. The Twentieth Century.**

**315. Black French-Speaking Writers of the Twentieth Century.** (3) Designed to acquaint the student with the primary and secondary authors with emphasis on Césaire, Damas, Fanon, and Senghor.

**MFL 371. Methods of Teaching Foreign Languages.** (3) This course acquaints the student with methods, materials, and texts. Bi-weekly classroom observation in secondary schools of the community are required. (Required of those wishing to be certified to teach.)

**411-12. The Classical Age of French Literature.** (6) Stresses the origins and foundations of French Classicism and its main representatives. Offered in alternate years.

**413. Main Ideas of the Eighteenth Century.** (3) Emphasizes the theories and philosophies of the works of the best authors of the century.

**441-2. French Civilization.** (6) The development of French civilization from its earliest beginnings to the present.

**MFL 450. Senior Project.** (3) Individual Research.

**451-2-3. Modern French Literature.** (9) Stresses the nineteenth century in the novel, drama, and poetry. The following aspects of French literature form the content of the course; Romanticism, Realism, the Parnassian reaction in poetry, naturalism and symbolism. (Offered in alternate years.)

**461-2-3. French Literature of the Twentieth Century.** (9) Consists of critical studies in the works of leading figures in the novel, drama, and poetry and stresses the philosophy and theories of selected contemporary writers. (Alternates with French 451-2-3.)

**480. Senior Seminar.** (3) Special topics in French to be offered according to the preferences and needs of the students.

**481-2. Commercial French.** (6) Designed to train students to write effective business letters in correct styles and in forceful language. Training includes the use of correct business letter practices, principles, and policies and the application of the requisites for success in foreign business communications.

## **GERMAN**

**101-2-3. Elementary German.** (12) Aims to develop the ability to write, read and understand simple German. A functional vocabulary is built up, and the essentials of grammar are stressed. Supplemented with graded reading. German 101 is the prerequisite to 102. German 101 and 102 are prerequisite to 103.

**201-2-3. Intermediate German.** (9) Consists of intensive and extensive reading of graded German works (literary and scientific). Fluency and accuracy of comprehension are the primary objectives. Prerequisite for 201: 103 or equivalent.

**300. Pronunciation and Diction.** (3) German phonology, morphology, and the essential principles of speech will be stressed. Prerequisite: German 202. (Formerly German 420).

**301-2-3. Advanced Oral and Written Composition.** (9) Emphasis on stylistics and mastery of detailed grammatical structures. (Formerly German 421-2-3.)

**311-12-13-14. Survey of German Literature.** (12) Consists of selected readings to give the student an acquaintance with outstanding writers, ideas, and movements in German Literature from the beginning of the German Language and Literature through the contemporary period.

**German 411. Classical Period of German Literature.** (3) Major authors and works with emphasis on Goethe and Schiller.

**German 412. The Romantic Period.** (3) Principal writers and works with stress on poetry and the Novelle.

**German 413. The Modern Period.** Major authors and their contributions with attention to Rilke, Mann, and Kafka.

## **SPANISH**

**101-2-3. Elementary Spanish.** (12) The development of the ability to understand, speak, write, and read Spanish. Spanish 101 is the prerequisite for 102. Spanish 101 and 102 are prerequisites for 103.

**201-2-3. Intermediate Spanish.** (9) Grammar review and the further development of the ability to understand, speak, write and read Spanish. Prerequisites: Spanish 101-2-3 or the equivalent.

**300. Pronunciation and Diction.** (3) The development of good articulatory habits through perception, imitation, and intensive drill with secondary emphasis on theory and phonetic symbols. Prerequisite: Spanish 202 (Formerly Spanish 420.)

**301-2-3. Advanced Oral and Written Composition.** (9) Intensive analysis of Spanish grammar with practical application in oral and written compositions. (Formerly Spanish 421-2-3.)

**311-12-13-14. Survey of Spanish Literature.** (12) Literary philosophies, types, major authors and their contributions from the earliest extant works to the present. Prerequisite: Spanish 203.

**311. Medieval Period and the "Renaissance."**

**312. The Golden Age.**

**313. Eighteenth and Nineteenth Centuries.**

**314. The Generation of 1898 and After.**

**321-2-3. Survey of Spanish-American Literature.** (9) Consists of selected readings to acquaint the student with representative works, authors and movement from pre-colonial times to the present day.

**MFL 371. Methods of Teaching Foreign Languages.** (3) This course acquaints the student with methods, materials, and texts. Bi-weekly classroom observation in secondary schools of the community are required. (Required of those wishing to certify to teach.)

**441. Spanish Civilization.** (3) The development of Spanish civilization from its earliest beginnings to the present.

**442. Spanish-American Civilization.** (3) History of Spanish-American civilization, culture, and institutions.

**MFL 450. Senior Project.** (3) Individual Research.

**451-2-3. Modern Spanish Literature.** (9) Stresses nineteenth-century novel, drama, and poetry with attention to *Costumbrismo*, Realism, Regionalism, and Naturalism. Offered in alternate years.

**461-2-3. Contemporary Spanish Literature.** (9) Consists of critical studies of the principal authors in the essay, novel, drama, poetry and related philosophies: Existentialism, *tremendismo*, *ultraismo*, *creacionismo*, *surrealismo*. Alternates with Spanish 451-2-3.

**480. Senior Seminar.** (3) Special topics in Spanish to be offered according to the preferences and needs of the students.

**481-2. Commercial Spanish.** (6) Designed to train students to write effective business letters in correct styles and in forceful language. Training includes the use of correct business letter practices, principles, and policies and the application of the requisites for success in foreign business communications.

## **ASTRONOMY**

**301-302. Descriptive Astronomy.** (3-3) An elementary introduction to the astronomical universe. This course considers the problems of distances, motion, chemical composition of the stars, the source of stellar energy, and modern cosmological theories. The student has the opportunity to observe representative celestial objects with the telescope.

## **PHYSICS**

**Physics III. Foundations of Physics.** (3) A study of the basic principles of physics. This course is designed for the student who has had no previous training in physics. (Credit in this course will not apply toward a major or minor in the physical sciences or mathematics.)

**191-192. Biography of Physics.** (1-1) A freshman reading course designed to give the beginning physics major a descriptive account of the classical and modern concepts in physics and their historical development.

**193. Computations.** (1) Slide rule calculations and the theory governing the calculations. A brief review of trigonometry and vector algebra.

**211-2-3. College Physics.** (4-4-4) Mechanics; Heat, Sound, and Light; Electricity; and Magnetism, and Modern Physics. A course in which the basic principles are presented. Required in biological and premedical curricula. Prerequisite: Mathematics 111-2-3. Three lectures and one laboratory period per week.

**221-2-3. General Physics.** (4-4-4) Mechanics; Heat, Sound, and Light; Electricity and Magnetism, and Modern Physics. This course is intended for engineering students and students

majoring in the physical sciences. Prerequisite: Mathematics 163. Successful completion of Physics 221 is prerequisite for Physics 222 and Physics 223. Three lectures and one laboratory period per week.

**311-2-3. Electricity and Magnetism.** (3-3-3) This course presents the fundamentals of theoretical electricity and magnetism. Considerable emphasis is placed upon the solution of problems. Prerequisites: Math 261-2-3; Physics 221-2-3; or Physics 211-2-3. Three lectures per week.

**314. Optics.** (4) A brief review of geometrical optics and a study of physical optics including spectroscopy. Prerequisite: Physics 211-2-3 or Physics 221-2-3; Mathematics 263. Three lectures. Three lectures and one laboratory period per week.

**321-2-3. Mechanics.** (3-3-3) Statics and dynamics of particles and rigid bodies. Lagrange's and Hamilton's equations: fluid statics, and vibrations. Prerequisite: Physics 211-2-3 or Physics 221-2-3; Mathematics 261-2-3. Three lectures per week.

**324. Heat and Thermodynamics.** (3) This course presents the fundamentals of heat and provides an introduction to thermodynamics with applications to chemistry. Prerequisites: Physics 211-2-3 or Physics 221-2-3; Mathematics 261-2-3. Three lectures per week.

**331-2-3. Electrical Measurements.** (2-2-2) In this course the theory of electrical circuits is studied and discussed. The laboratory work is intended to give experience and facility in the handling of electrical measuring instruments. A comprehensive list of experiments is required, covering modern methods of mastering current, resistance electromotive force and power, and the calibration of instruments employed, together with measurements of capacity inductance, and ferro-magnetism. Prerequisites: Physics 221-2-3 or Physics 211-2-3; Mathematics 261-2-3. Two laboratory periods per week.

**341-2-3. Advanced Laboratory.** (2-2-2). This course is designed to permit the student to develop a variety of laboratory skills and techniques by performing experiments of an advanced nature selected from the areas of: Mechanics, Heat, Sound, Light and Modern Physics. Prerequisites: Physics 221-2-3; Mathematics 261-2-3. Two laboratory periods per week.

**371 — Teaching of Physics in the Secondary Schools.** (3) This course emphasizes the use of materials and methods suitable for use in secondary schools. Techniques of caring for apparatus, tools, and materials are included.

**412-3-4. Modern Physics.** (3-3-3) The Classical and modern concepts of the atom and radiation are developed; introduction to molecular structure, the chemical bond, nuclear physics; fission, isotopic tracers; medical radiology; cosmic rays. Prerequisites: Physics 221-2-3 or Physics 211-2-3; Mathematics 261-2-3. Three lectures.

**450. Senior Project.** (3).

## MATHEMATICS

**103. Mathematics for Teachers.** (3) Designed to introduce the prospective elementary school teacher to some of the new concepts in mathematics. Prerequisite: Math 112 or equivalent.

**111-112-113A. Introduction to College Mathematics I-II-III.** (3-3-3) Fundamental operations in arithmetic and algebra, equations, functions, graphs, exponents, logarithms, and trigonometric functions.

**111-112-113B. Introduction to College Mathematics I-II-III.** (4-3-3) The content in this sequence is the same as Math 111-112-113A. However, students enrolled in Math 111B are scheduled to attend four lectures and/or laboratories per week instead of three lecture periods. This sequence is designed for students scoring in lower percentiles of the mathematics test admission. The courses are to be taken in sequence. Prerequisite for Math 112: Math 111. Prerequisite for Math 113: Math 112.

**111-112-113E. Quantitative and Analytical Thinking.** (12) An introductory course designed to help students gain an understanding of the fundamental operations of mathematics and to develop interest, skill in logical thinking and knowledge of concepts of the theory of sets. The approach is that of student involvement provoking analytical thinking rather than "lecture" method. (General orientation is included).

**161-162. Unified Algebra and Trigonometry I-II.** (5-5) An integrated course in algebra and trigonometry intended for the mathematics, science and engineering major whose records indicate deficiencies in these areas.

**163. Analytic Geometry.** (5) Coordinate schemes, equations and their logic, translation and rotation of axes, lines, circles, parabolas, ellipses, hyperbolas.

**173. Mathematics of Finance.** (3) Compound interest and discount, annuities, amortization and sinking funds, depreciation, bonds, life annuities, life insurance. Prerequisite: Math 112.



- 191. The Algebra of Sets and Logic.** (1) An elementary treatment of the basic concepts of the theory of sets and propositional logic.
- 192. Introduction to Vector Algebra.** (1) A brief exposition of the algebra of vectors, and some applications of vectors.
- 193. Intuitive Calculus.** (1) A brief survey of the underlying ideas of differential and integral calculus. Emphasis will be on the conceptual aspects of the subject, rather than technique and applications.
- 194. Computer Programming I.** (1) The FORTRAN language and the programming of elementary problems in algebra, trigonometry, and calculus. Prerequisite: At least one course in the calculus, which may be taken concurrently.
- 261-2-3. Calculus I-II-III.** (5-5-5) Differentiation and integration of algebraic and transcendental functions with applications; infinite series and approximate computation. Prerequisite: Math 163.
- 291. Elements of Finite Probability.** (1) A brief survey of discrete probability and applications. Prerequisite: Consent of the instructor.
- 292. Elements of Finite Statistics.** (1) An elementary exposition of the basic statistical concepts. Prerequisite: Consent of the instructor.
- 293. Introduction to Continuous Probability.** (1) A heuristic approach to continuous probability distributions and some statistical applications. Prerequisite: Math 291.
- 311-12. Probability and Statistics I-II.** (3) Probability distributions; expected values; moments; limit theorems, sampling and sampling distributions; tests of hypotheses. Prerequisite: Math 263 or equivalent.
- 313. Numerical Analysis (formerly 427).** (3) Methods of numerical computations; interpolations; numerical integration and differentiation; solution of algebraic, transcendental, and differential equations. Prerequisite: Math 263 or equivalent.
- 331-332-333. Concepts of Modern Geometry I-II-III.** (3-3-3) Advanced plane geometry; synthetic and analytic projective geometry and its relationship to Euclidean and other geometries. Prerequisite: Math 263 or equivalent.
- 341-2-3. Calculus IV, V, VI (formerly 441-2-3).** (3-3-3) Multidimensional calculus. Euclidean space, mappings and their differentials, manifolds, differential forms, and vector analysis. Prerequisite: Math 263.
- 361-362. Linear Algebra I-II.** (3-3) Definition and basic operations with matrices; vectors and linear equations; eigen-values and eigenvectors; infinite series of matrices. Prerequisite: Math 263 or equivalent.
- 363. Theory of Equations.** (3) Complex numbers; theorems and methods relating to the solutions of polynomial equations; numerical approximations. Prerequisite: Math 263 or equivalent.
- 364. Introduction to Modern Algebra.** (3) Consideration of fundamental mathematical systems and concepts of modern algebra, including integral domains, groups, fields, and rings.
- 371. The Teaching of Mathematics in the Secondary Schools.** (3) Lectures, discussions, and reports on problems connected with the content and methods of mathematical instruction in the junior and senior high schools. Prerequisite: Math 263 or consent of the instructor.
- 391. Infinite Series.** (1) Convergent and divergent series; Taylor's and MacLaurin's series; Fourier series and orthogonal functions. Prerequisite: Consent of instructor.
- 392. Algebra of Complex Numbers.** (1) Introduction to the algebra and geometry of complex numbers with applications. Prerequisite: Consent of instructor.
- 393. Calculus of Complex Numbers.** (1) An intuitive approach to the theory and applications of functions of a complex variable. Prerequisite: Consent of instructor.
- 450. Senior Project.** (3) Individual study and written presentation of a special topic in mathematics or the teaching of mathematics. Required of all prospective graduating seniors in the department. Prerequisite: Senior standing.
- 451-452. Functions of a Real Variable I-II.** (3-3) Basic properties of the real numbers; theory of limits, continuity, uniform continuity and convergence; calculus of functions of several real variables; implicit functions. Prerequisite: Math 263 or equivalent.
- 453. Functions of a Complex Variable.** (3) Basic definitions and topological concepts; differentiation and integration of functions of a complex variable; the elementary functions, Cauchy's theorem, Taylor series, Laurent series, and calculus of residues. Prerequisite: Math 263 or equivalent.

**461. Special Topics in Calculus.** (3) Infinite Series, Improper Integrals, Fourier Series and Integrals, Gamma and Beta Functions, and Elliptic Integrals. Prerequisite: Math 263 or equivalent.

**462-3. Differential Equations I-II.** (3-3) Classification and solution of common types of elementary differential equations; applications; introduction to partial differential equations. Prerequisite: Math 263 or equivalent.

**472. History of Mathematics (formerly 322).** (3) The origin and development of mathematical ideas beginning with geometry and algebra and continuing through selected topics in modern mathematics. Prerequisite: Math 263 or consent of the instructor.

**473. Introduction to Mathematical Logic.** (3) Introduction to the nature of consistency and valid inference. Isomorphisms among derivation systems, truth-value structures, and English. The sentential derivation. Prerequisite: Consent of instructor.

**474. Predicate Logic.** (3) Predicate calculus: Universal and existential quantification, to logic of identity. Informal proofs. Theory of definition. Elementary set theory. Prerequisite: Math 473.

**475. Axiomatic Set Theory.** (3) An axiomatic treatment of set theory. The relation of logic and set theory to scientific method. Multivalued logics, inductive versus deductive process, the logic of statistics. Prerequisite: Math 474.

**480. (A through J). Advanced Topics in Mathematics.** (3) Special topics in mathematics to be offered according to the preferences and needs of the students.

- A. Boolean Algebra
- B. Combinatorial Analysis
- C. Elementary Number Theory
- D. Operational Calculus
- E. Linear Operators
- F. Vector Calculus
- G. Tensor Calculus
- H. Metric Differential Geometry
- J. Elementary Topology

**491. Linear Programming.** (1) Elements of linear programming with applications to economic and industrial problems. Prerequisite: Consent of instructor.

**492. Finite Markov Chains.** (1) A brief survey of the theory of Markov Chains and its applications. Prerequisite: Consent of instructor.

**493. Difference Equations.** (1) Linear difference equations and applications in the social sciences. Prerequisite: Consent of instructor.

## COMPUTER SCIENCE

### Computer Science

Offered by Computer Science and Information Processing Center:

**193. Basic Computer Programming.** (2) Introduction to some of the basic types of statements in the FORTRAN language. Some elementary problems from algebra, trigonometry and geometry, as well as some business oriented problems will be coded and executed on an IBM 1620 computer. Prerequisite: Consent of instructor.

**291. Computer Programming.** (2) An extension of 193 using more advanced programming instructions with emphasis on problems making use of Function Subprograms and Subroutine Subprograms. Problems from mathematics, engineering, science and business will be flow charted, coded and executed on an IBM 1620 computer. Prerequisite: C. S. 193 or equivalent.

**313. Numerical Calculus.** (3) Emphasis will be placed on the computational aspects of numerical methods as opposed to the theoretical approach. Mathematical models; solution of systems of linear and nonlinear equations; error analysis; numerical differentiation and integration; inversion of matrices; statistical techniques including curve fitting. The basic tools of the course will be the IBM 1620 and/or desk calculators. Prerequisites: Math 263 or consent of instructor.

**331-2-3. Logical Design of Digital Computer I, II, III.** (3-3-3) A first course in logic and switching theory. The course content includes Boolean Algebra, analysis, synthesis, and minimization methods using the tools of algebraic manipulation, the Teitch diagram method, Karnaugh map, Quine-McCluskey theorem, factoring, and multiple outputs; various switching circuits will be covered. Huffman-Moore model of sequential circuits will be discussed. Design aspects and simplification techniques on logic design of I/O; arithmetic, control and memory units, etc. will be studied. Prerequisite: Junior or senior standing.

**341. Computer Organization and Programming Systems.** (3) Description of the organization of computers. To introduce procedure-oriented languages and knowledge of the machine. To better understand the hardware, functional units such as memory, arithmetic units, control units, and the individual machine instructions and the use of these elements in combination to produce effective programs.

**342-43. Numerical Analysis I, II.** (3-3) A more comprehensive treatment of numerical methods with emphasis upon the theoretical aspects of the subject. Solution of systems of linear equations using iterative techniques, solution of non-linear equations; numerical differentiation and integration; solution of ordinary differential equations using Runge-Kutta methods; solution of partial differential equations using finite difference methods; integral equations. Applications to IBM 1620 is optional. Prerequisites: Math 263 or Math 313.

**363. Programming Languages.** (3) This course will deal with the survey of existing programming languages, from the assembler languages to the higher order languages; their power and weakness will be discussed. The students, after taking this course, will be in a position to evaluate the relationship between source programs and run-time. This course is imperative to those students who desire the course in Compiler Design — C. S. 441. Prerequisite: C. S. 291.

**441. Compiler Design.** (3) This course will deal with the design aspect of compilers of higher order languages such as Fortran, Cobol and simulation languages for usage of scientific or business applications. Students, with instructor's consent, may choose to take this course as formal course work or as a senior project. Prerequisite: C. S. 341 and 363.

**442-3. System Design.** (3-3) These courses will deal with the system studies of hardware and software aspects of a digital computer. Studies of various computer related equipment and units individually as well as their interrelationship in the over all physical make-up of a digital computer will be included. Concepts of problem programming and system programming will be discussed. Studies of various systems such as Monitor, Core Storage Dump Program, System Editor, Input-Output Executor, etc. will be made. Prerequisite: consent of instructor.

## **SOCIOLOGY**

### **Sociology**

**111E-112E-113E. Social Institutions—Their Nature and Change.** (12) Presents a multidisciplinary approach to the study of man's personal, social and natural environment. Students are encouraged to use the tools and techniques of the social scientist to develop critical thinking, inductive and deductive reasoning, hypothesis formulation and testing, and generalizations. Topics — Youth and Society, The Family, American Cities and Urban Problems, and the Civil Rights Movement and Revolution. (General orientation is included).

Sociology 211-2-3 are prerequisites for all 300 and 400 level Sociology courses.

**211-2-3. Introduction to Sociology.** (9) This series of courses is focused upon the relationship of people to their physical and cultural surroundings and to each other. A systematic conceptual framework developed that will permit the student to view the social world and its major problems in terms other than common sense.

**221. Anthropology.** (3) Studies man's social origin with emphasis on the development of races and languages; the origin, nature and diffusion of cultures; and a comparison of the principal cultures of the world.

**303. Introduction to Field Study.** (3) A study of the theory and methods of social research including the structure and use of the questionnaire, the schedule, the interview case histories, sociograms, sampling, etc.

**322. The Family.** (3) Principles and problems associated with the organization, disorganization and reorganization of the family in the American and other societies.

**323. Problems of Courtship and Marriage.** (3) A critical approach to problems of courtship, marriage and the family, with emphasis on marital roles and adjustments; biological and economic problems; women and the family; child-parent relationships; war and the family.

**332. Social Pathology.** (3) An analysis of the various aspects of personal and social disorganization as they are expressed, not only through abnormal activities, but also through socially approved cultural patterns. Analysis made in terms of a consistent framework, the central notion of which stresses the unitary nature of the process through which both the normal and abnormal come into being.

**351. Introduction to Social Psychology.** (3) A study of the biological and social basis of human behavior with emphasis on the development of personality and an analysis of the general social setting in which personality development occurs.

**380. Industrial Sociology.** (3) The human relations of modern business and industrial organization, the interdependence of the technological and social factors and some implications



for the adjustment of the individual on the job and in the community. Prerequisites: Sociology 211-212-213 or the permission of the instructor.

**393. Racial and Cultural Relations.** (3) An examination of the problems, relationships and adjustments of racial, cultural and ethnic minorities. Emphasis on the nature of these phenomena as they occur in the American social setting.

**412. Criminology.** (3) Includes an examination of the problems of crime and criminals; the making of the criminal; the theories of crime and punishment; machinery employed in dealing with the criminal; penal and correctional institutions and programs of correction. Case studies and visits to institutions serve as aids in enriching understanding.

**421. Population Problems.** (3) Theories and trends in population growth in conjunction with the political and economic implication of these trends at regional, national, and international levels.

**442-3. Rural Sociology.** (6) The structure of dynamics of rural life, together with a consideration of the technological and social changes in the rural community.

**450. Senior Project Writing.** (3)

**PART I** — An orientation to the methods and techniques employed in both private and official community services agencies for dealing with specific and multiple social problems. Emphasis is placed upon the sociology of individual and group behavior under certain social stress situations as an enabling factor in the helping professions.

**PART II** — A supervised internship in selected community services agencies or the alternative of a supervised research project. Emphasis is placed upon the dynamics of human behavior, interpersonal relations and methods of helping people help themselves. A written report of the internship is required.

**451. Juvenile Delinquency.** (3) Covers the major causes and problems involved in anti-social acts of children. A study of the methods used in prevention of delinquencies and treatment of the juvenile including probational and institutional care.

**452-3. Sociology of Child Development.** (6) A study of the development of the child with emphasis upon a distinct sociological approach to behavior in relation to the family, play groups, school situations, the community and larger social institutions. Designed to acquaint prospective teachers and majors in sociology with the influences of social institutions upon the child's total development. Admission only with the approval of the instructor.

**460. Problems of the Poor In America.** (3) An account of the problems of poverty taking into consideration the economic, educational, psychological and sociological aspects.

**461. Urban Sociology.** (3) A study of the growth of urbanism, its spatial and communicative extension into rural areas, and its impact upon the economy, the values and the social organization of communities. The spatial structure and land use patterns of urban and fringe areas and their implications for social service and police administration analyzed.

**463. Social Stratification.** (3) This course focuses on the development of differential status categories in society. An examination of the distinctions among the class society, the caste society, the slave society, and estates.

**482. Collective Behavior.** (3) Treatment of a wide variety of collective groupings and movements; their origin, organization, membership, leadership, and dissolution. Includes an analysis of such social phenomena as institutions, formalized and congenial groupings, audiences, publics, crowds, mobs, fads and fashions and mass movements such as social unrest and reform.

**491. History of Sociological Theory.** (3) Major sociological theories as represented by Comte, Spencer, Durkheim, Weber, Simmel, et al., including those of the contemporary period.

**492. Personality and Social Adjustment.** (3) The adjustment of the individual is approached from the point of view of the cultural anthropologist and sociologist. The impact of the culture and group life upon the personality is examined.

**493. Social Control.** (3) An examination of the agencies and methods of social control both formal and informal.

**494. Educational Sociology.** (3) This course explores the social significance of education and educational significance of the social process. It examines possible solution to social problems through a knowledge of the social process. It explores the educative process as experienced by the individual in his cultural and group life.

## **SOCIAL WELFARE**

### **SOCIAL WELFARE**

**101. Orientation.** (1) A course required of all freshmen in the Area of Social Welfare. Designed

to orient the student to the University, and to acquaint him with opportunities for study and employment in the various areas of social work.

**341. Social Work as a profession.** (3) A survey of contemporary social work. Emphasis is placed on objective and historical development of the social work concept.

**342. Social Welfare — Its Structure and Function.** (3) A study designed to show the many governmental and non-governmental agencies and how they contribute to the social welfare of all American citizens. It will also reflect a way of life, and give an awareness of the multiple, flexible possibilities of future welfare programs.

**351-2-3. The Social Work Processes.** (12) Consideration is given to the basic skills used in working with people. Emphasis is placed on principles, methods, techniques utilized in solving problems and needs of individuals, families, groups and communities. Techniques of interviewing and recording will be incorporated into the processes through a laboratory experience. Prerequisites: 341, 342.

**343. Casework Services for Children** (3) A course designed to provide students with knowledge of the principles and practices of the seven basic casework services for children whose parents need help in providing adequately for their care and guidance. Each service is defined with discussion as to the special help offered to a child with a description of the effective conditions. Prerequisites: 341-2, 351-2-3. Winter Quarter.

**360. Group Leadership.** (3) An analysis of leadership as to types and purpose, with emphasis on its application to activities, age, sex and program development. Prerequisites 341-2, 351-2-3, Art 411. Winter Quarter.

**401-2-3. Field Experience** (9) Supervised practice in selected social agencies which provides an opportunity for students to apply theory to actual practice. Prerequisites: 341-2, 351-2-3.

**405-6-7. Social Welfare Seminar.** (6) Gives students in field experience an opportunity to discuss and share problems encountered in agency settings and skills and techniques used in handling them. Taken concurrently with 401-2-3.

**433. Social Work and Health Problems.** (3) Elementary medical information for social workers. The course revolves around the symptoms, etiology and emotional aspects for chronic diseases and disability. Emphasis is on the social worker's role as a member of the medical team in providing social treatment for the sick person. Prerequisites: 341-2, 351-2-3. Spring Quarter.

**443. Problems of the Aged.** (3) A course designed to examine physical, sociological and psychological aspects of aging. It examines the financial dependence or independence of the aged; analyzes needs to discuss the various resources available for meeting these needs. Prerequisites: 341-2, 351-2-3. Spring Quarter.

**450. Social Welfare Research.** (3) Attention is given to social welfare literature and practices. Guidance is given to students interested in working on special problems in Social Welfare. Course is limited to Social Welfare majors with senior standings. Prerequisites: 341-2, Sociology 303.

**482H. Honors Social Welfare.** An opportunity for students to do independent study in examining current problems related to the social work profession and the field of Social Welfare. Students are required to submit a senior essay on a topic of special interest to them. Limited to students with 3.0 average. Offered Spring Quarter.

**490. Senior Seminar.** (0) A non-credit course aimed at: (1) integrating interest areas through discussion; (2) emphasizing new trends and contributions to the field; (3) reviewing recent literature for the purpose of building up a personal library; and (4) to familiarize students with the Civil Service Merit Examinations and other techniques for gaining employment. Offered to third quarter seniors.

## **SPEECH**

### **Speech**

**102. Speech Improvement.** (3) This course deals with listening and speaking and practicum in speech improvement. Students will be tested in speech and hearing at the beginning of the course.

Course requirements include two lectures and two laboratory periods.

**201. Fundamentals of Speech.** (3) A study of the fundamental theory and practice of voice usage as related to effective speech.

**202. Public Speaking.** (3) The practice of speech composition and delivery will be stressed. The student will have practice in preparing and presenting short, informative, entertaining and persuasive speeches. The method in which the student is trained is applicable to social and business conversation as well as to public speaking.

- 203. Argumentation and Debating.** (3) The principles and practices of argumentation, an analysis of propositions, evidence, brief making, and preparation and delivery of forensics, as well as participation in classroom discussions. Techniques governing round table, forum and panel discussions will be studied.
- 204. Language and Speech Development of Children.** (3) Normal development of speech and language in young children.
- 207. Articulation Disorders.** (3) Introductory consideration of diagnostic and therapeutic procedures in dealing with articulation disorders. Prerequisites: Speech 212 and 213.
- 212. Phonetics.** (3) An introductory to the study of phonetics, the symbolization of speech sounds, kinesologic phonetics, American speech style, and applied phonetics.
- 213. Speech Correction.** (3) Especially designed to meet the needs of the teacher of speech in public schools and colleges. This course will deal with actual clinical processes in the theory and practice of speech correction and training and visual hearing. Prerequisite: Speech 201.
- 221. Business and Professional Speech.** (3) Designed purposely for the student with neither a major nor minor in the field of speech. Emphasis is placed on the following speech situations; business interviews, conference, reports, and similar types of business conversations. In addition, the student's individual speech is analysed and checked.
- 223. Choral Speaking.** (3) Oral group interpretation of verse. Affords an opportunity for intensified and vital artistic expression through the formation of a speaking choir. Values for both elementary and adult groups. Methods of conducting groups and selection of materials will be considered. (Class limited to 25).
- 322. Stuttering and Allied Disorders.** (3) Theories, etiologies, and therapies as applied to stuttering rehabilitation. Consideration given to allied disorders as cluttering, pyknolepsy, etc.
- 323. Psychology of Speech.** (3) Origin of speech in man and its psychological and semantic connotations.
- 324. Hearing Disorders.** (3) Symptomatology and pathology of acoustic disorders; principles of audiologic and medical management. Prerequisites: Speech 204, Speech 494 (Anatomy and Physiology of the Hearing Mechanism).
- 325. Aural Rehabilitation.** (3) Principles and methods of clinical and classroom retraining of the hard-of-hearing and deaf, including emphasis on auditory training, speech for the deaf, hearing aids, conservation and counseling. Prerequisite: Speech 326.
- 326. Basic Audiometry.** (3) Principles and application of basic or pure tone audiometry; its employment in the schools.
- 328. Diagnosis in Speech and Hearing.** (3) Principles of diagnosis in locating hearing and speech problems. Prerequisites: Speech 213, 324.
- Speech 351. Oral Interpretation.** (3) Introductory course to develop understanding and appreciation in literature through the oral re-creation of poetry and prose.
- Speech 354. Contemporary Black Speakers.** (3) A study of selected speeches of contemporary black leaders who have contributed to and made an impact on American life. The speeches will be analyzed according to the principles of rhetoric based on Aristotelian standards. Prerequisites: Speech 201 or Speech 202.
- 361. Parliamentary Procedure.** (3) A study of the rules and techniques of parliamentary practices.
- 371b. Methods in Public School Speech and Hearing Programs.** (3) Diagnosis, management, organization, and therapy in the public schools. Approval of academic advisor.
- 381. Voice Science.** (3) Consideration of aspects of the phonetic, anatomic, physiologic, and physical bases of speech. (Laboratory practice.)
- 392. Language and Speech Problems of Cerebral Palsy.** (3) Language and speech disorders associated with cerebral palsy. Consent of advisor.
- 393. Anatomy and Physiology of the Vocal Mechanism.** (3) Introductory study of the vocal apparatus from the viewpoint of anatomy and physiology.
- 394. Anatomy and Physiology of the Hearing Mechanism.** (3) Brief consideration of the anatomy and physiology of the hearing apparatus.
- 450. Senior Project.** (3)
- 451. History of English Language.** (3) Same as English 451. Prerequisite: Speech 201.
- 452. Advanced Public Speaking.** (3) A study of the standards of criticism and techniques involved in effective public address.



**461. Public Address I.** (3) A study of speech making from ancient time through the Renaissance and includes attention to the development of rhetorical theory.

**462. Public Address II.** (3) A study of speech making from the Renaissance to the modern times and includes attention to the development of rhetorical theory.

**463. Advanced Public Discussions.** (3) A study of types of discussions.

**472b. Observation and Practicum in Public School Speech Correction.** (12) Observation and internship in public schools at off-campus centers in the state under the direction of an experienced city or county speech clinician. Visitation by University clinical supervisor.

**474. Childhood Aphasia.** (3) Consideration of linguistic, speech, educational, and personality problems of children suffering from aphasia. Prerequisites: 21 hours in major field.

**475. Cleft Palate Speech Habilitation.** (3) Oral communication problems, etiology, and remediation of children having cleft lip and palate. Prerequisites: Speech 213 and Speech 393 (Anatomy and Physiology of the Vocal Mechanism).

**483. Clinical Methods and Practice in Speech Pathology.** (3) Study of cases and practice in clinical diagnosis and remedial treatment.

**491. Theatre Workshop.** (3) This course will deal with the fundamental techniques of the rehearsal and the performance. The class will present a three-act play each quarter or a series of one-act plays. Open to members of the Tennessee State Players Guild and other students.

**492. Special Problems in Speech Pathology.** (3) Seminar study of some selected problems in speech pathology. Prerequisite: 21 hours in major field.

**493a-b-c-d-e-f. Supervised Clinical Practicum.** (6) Experience with speech and voice cases in University speech and hearing clinic, or at some rehabilitation center. May be repeated for credit. Consent of Clinical Director.

## **DRAMA**

### **Drama**

**111-12-13. Theatre Practice.** (1-1-1) An introduction to theatre organization and practices.

**211. Elements of Acting.** (3) Study and practice in the fundamentals of acting technique. The importance of voice, posture, gesture, and movement in theatrical expressiveness. Scenes from the world's best dramas will be analyzed and used as criteria for the course.

**301. General Dramatics.** (3) Basic principles of stage design, casting, acting, techniques, preliminary script analysis, and the technique of producing plays. The student will be required to make a prompt book and to apply this technical knowledge to the productions of the year.

**302. Play Interpretation and Direction.** (3) The fundamental principles of directing are taught through exercises and projects. Each student will be required to direct a one-act play, and to attend rehearsals of the Tennessee State Players Guild. Study and practice in the methods by which the values of the written drama are translated to the stage in terms of acting, stage composition, grouping, movement, tempo, smoothness, and rhythm will be emphasized. Prerequisite: Speech 301.

**303. Playwriting.** (3) General principles and techniques of playwriting. Practical laboratory work dealing with a study of the plot, characterization, and dialogue necessary for creative production for stage, radio and screen will be stressed. The student will have an opportunity to stage his original plays in the workshop theatre. Prerequisite: Speech 302. Also open to junior and senior English majors.

**311-12-13. History of the Theatre** (3-3-3) The Greeks, the Orient, Europe and America. The physical playhouse, methods of production, great actors, stage machinery, scenery, costumes and masks.

**331. Children's Theatre I.** (3) Creative dramatics. This course is concerned with the history of the Children's Theatre movement in the United States and Europe.

**332. Children's Theatre II.** (3) Organizing the children's theatre program. (grades 1-8)

**333. Children's Theatre III.** (3) Organizing the youth theatre program. (grades 9-12)

**341. Introduction to Drama.** (3) Study of drama as a literary form. Prerequisite: English 213.

**342. Modern Drama.** (3) Extensive study of selections from modern European Drama. Readings and reports.

**343. American Drama.** (3) Continuation of Speech 342. Prerequisite: English 213.



**Drama 355. The Negro in the Theatre.** (3) A study of the Negro in the American Theatre from Greek Drama to 1900.

**Drama 356. The Negro in the Theatre.** (3) A study of the Negro in the American Theatre from 1900 to the present.

**372. Radio and Television Production.** (3) An introductory course dealing with the basic principles of formulating and producing the radio and television programs.

**373. Radio and Television Acting.** (3) Methods and techniques involved in the presentation of radio and television plays.

**374. Radio and Television Writing.** (3) A study of the techniques and methods used in writing the radio and television script. The student will be required to write a number of scripts for various types of programs.

**411. Shakespeare.** (3) Same as English 411.

**412. Community Drama.** (3) The problems of the teacher, and community worker in the presentation of plays. Special emphasis will be placed upon directing and recreational activities in the rural and urban communities. General techniques in organizing and managing the Little Theatre and social centers, churches, and clubs will be stressed. The student will have an opportunity to make general equipment for the community theatre in the scenic workshop.

**421. Stage Design.** (3) The theory, technique and practice in designing stage scenery.

**422. Stagecraft.** (3) The theory, technique and practice in the making of various types of stage scenery.

**423. Stage Lighting.** (3) The theory, methods, and practice in stage lighting. Students will have practical problems in designing the lighting for various productions during the year.

**431. Costume Design.** (3) The history of stage costume from the ancient times to the present. Emphasis will also be given to the theory and practice in the designing and making of costumes for the stage.

## **COURSES IN PHILOSOPHY**

**Philosophy 201E** (3) (Elements of Knowledge)

**Political Philosophy and the Black Experience.** Readings in political philosophy of Washington, Dubois, Garvey, King, Panthers, Muslims, Cleage, Fanon, et. al., with a view to discovering and initiating solutions to social/political problems. Outside lectures on occasion.

**Philosophy 202E.** (3) (Elements of Knowledge)

**Philosophy of the Knowing Process.** Examines the structure and presuppositional foundations of knowledge and the social functions of knowledge as presented in various social laws and theories. Selected readings from Descartes, James, Orwell, Ayer, Watts, et. al.



### **Philosophy 203E. (3) (Elements of Knowledge)**

**Philosophy of Religion.** Examination of various ground motives and the pretended autonomy of theoretical thought. Attempt to demonstrate that the whole of life is directed by a religious choice. Readings in Cleage, Cone, James, Russell, Nietzsche, Sartre, Tillich, and Schaeffer.

**Philosophy 301. Biblical Literature. (3)** A consideration of the primary document of our religious heritage. Both the Old Testament and the New Testament will be considered without imposing any sectarian or particular point of view upon the student. Interest is placed on the discovery, through the literature of the Bible and intertestamental books of the Judeo-Christian tradition, of the development of the six basic concerns of religion.

**Philosophy 323. Introduction to Philosophy. (3)** Covers a consideration of the methods of philosophical problems arising from the physical, biological, and social sciences, and from art, morality, and religion.

### **HONORS COURSES**

**182H. Honors Art Appreciation. (3)** A comprehensive survey of the art of prehistory: Egypt, Greece, Rome, and the Romanesque and Gothic periods; the art of the Renaissance; Baroque and Rococo periods. Emphasis on comparing these periods historically as well as stylistically. Three lectures.

**181-2-3H. Honors Animal Biology. (15)** A course designed for students of exceptional caliber. Emphasis is placed on individual critical and original thinking based on recent research findings dealing with animal biologic principles. As such the student will be expected to do extensive reading of literature, make special reports and participate in guided discussions. Laboratory problems are so designed as to challenge the ingenuity and creativity of the student. Three lectures and two laboratory periods.

**181-2H. Honors Freshman English. (6)** An Honors Course in Freshman English designed for students with special competence in English to work at an advanced level. Class enrollment is limited and restricted to students notified as having qualified for the English Honors section.

**181H. Honors Growth of Civilization. (3)** The Course of Civilization: Classical Age of Greece and Rome. Fertile Crescent, Egypt, India. An intensive investigation of the development of man from the dawn of history to the modern period. Advanced scholastic students (top percentile) will engage in intensive and extensive study of the social, intellectual, economic, geographical, and political developments of man to the classical civilizations of Greece and Rome.

**182H. Honors Growth of Civilization. (3)** The Course of Civilization: The Early Middle Ages. Later Middle Ages—Man's development in Asia, Europe, Mediterranean, African and the Middle East and the Western Hemisphere.

**183H. Honors Growth of Civilization. (3)** The Course of Civilizations: Renaissance and Reformation. Absolutism, Rationalism, Commercialism, Nationalism, Industrialism. Democracy and the Age of Total War and Revolution to the Present.

**181H. Honors Music Appreciation. (3)** A study of basic materials of music; analysis of masterpieces of music with reference to cultural, social, and economic life of the times; group attendance of concerts and recitals with preliminary discussion periods. Three lectures.

**181H. Honors Freshman Orientation. (1)** A course designed to assist the freshman student in his adjustment to college life in the area of learning, educational and vocational planning, and interpersonal relations. Offered in fall quarter.

**181-2-3H. Honors Social Studies. (9)** This course is designed to acquaint the student with the many facets of the Social Sciences including the evolution of man's culture from both the Anthropological and Sociological viewpoint. A comparative study of primitive and contemporary ways of life of the various group of mankind throughout the world, projections into the future relative to the different philosophies and ideologies and their effect on the technological advancements of the peoples of the world.

**183H. Honors Freshman English (colloquium). (3)** Lectures, discussions and student writing based on the central theme "Changing Concepts of the Nature of Man." Original work and interpretations and adaptations of original works are bases for discussions. The course is conducted by two members of the Honors faculty. Offered in spring quarter.

**281H. Honors American History. (3)** An intensive and extensive investigation of the history of the United States. The emphasis is upon man and his ideas and ideals and issues and personalities—and how they met responsibilities and challenges in their time for posterity. The following topics are to be considered: (1) A new nation is born; (2) The United States Establishes itself at home and abroad; (3) Nationalism, Sectionalism and Jacksonian Democracy.



**282H. Honors American History.** (3) Topics Considered: (1) Expansion and Slavery lead to the Civil War; (2) The United States Shapes its Future; (3) The United States Takes its Place Among the Nations of the World.

**283H. Honors American History.** (3) Topics Considered. (1) World War I and Its Aftermath; (2) Franklin Roosevelt faces a Crisis at Home and Abroad. (3) Can the United States Point to a Better World Order?; (4) The United Nations, 1945-1965; (5) An introduction to the History of Africa, India, Southeast Asia, and Far East and America's response to and challenge in these areas; (6) The Age of Kennedy, Johnson, and Goldwater.

**281H. Honors Foundations of Education.** (3) This course is designed to challenge the abilities of exceptional students toward a clear understanding of the historical, philosophical and sociological aspects of education and how these areas of education have relevancy to the work of contemporary schools. The method will include presentation of basic theoretical and methodological principles essential to the investigation and solution of education problems. Emphasis will be placed on aiding and encouraging creative thinking.

**282H. Honors Human Development.** (3) A contemporary approach to the important processes of human development as viewed chronologically from infancy through senescence. The student will pursue a case study approach in analyzing the various stages of growth and development. Emphasis will be placed upon an interdisciplinary approach within the developmental process. Individual interest projects coordinated with existing research data will be an integral part of the course content.

**283H. Honors Psychology of Learning.** (3) Development of an overall knowledge of learning theories and theorists through the use of leading research studies. Students will be given the opportunity to become familiar with an interdisciplinary approach by examining materials in related fields such as cultural anthropology, psychiatry, biology, and sociology. Individual projects, seminars, and related experiences will be provided as part of the overall learning process.

**281-282H. Honors World Literature.** (6) An Honors Course in World Literature designed for students with special interest and aptitude in literary studies at an advanced level. Class enrollment is limited and restricted to students who have been selected for inclusion in the Honors Section of World Literature.

**283H. Honors World Literature (colloquium).** (3) Lectures, discussions and student writing based on the central theme "The Good Society." Original work and interpretations and adaptations of original works are bases for discussions. The course is conducted by two members of the Honors faculty. Offered in spring quarter.

**382H. Honors Junior Colloquium.** (3) Lectures, discussions, and student writing based on the central theme "The Twentieth Century." Original work and interpretations and adaptations of original works are bases for discussions. The course is conducted by two members of the Honors faculty. Offered in Winter Quarter.

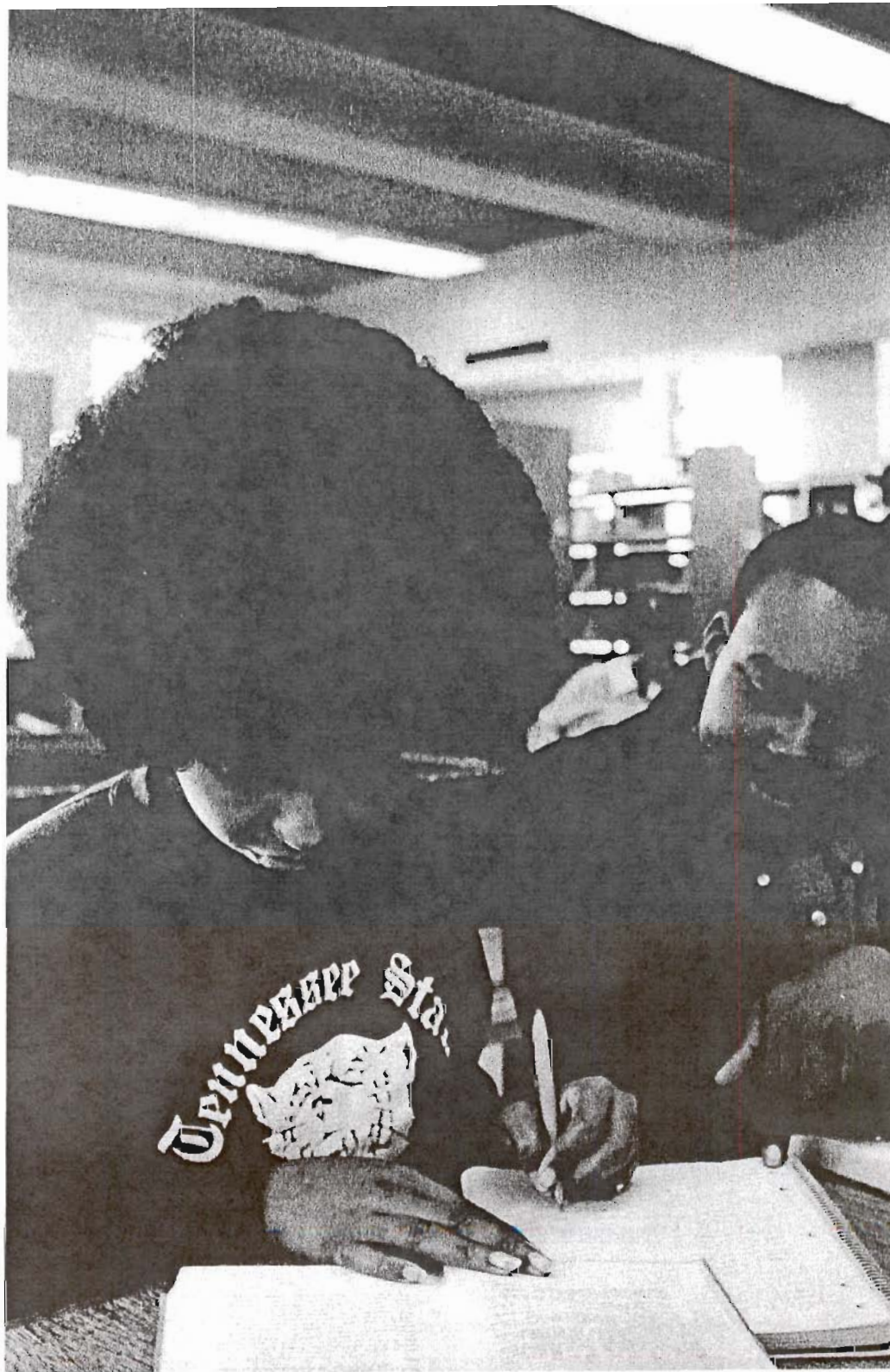
**387H. Curriculum Development.** (3) The course is designed (1) to give students an opportunity to critically study the major stages of development of the school curriculum in public education in the United States; (2) to study in depth those forces and factors in our culture which have brought about major changes in the structure, content and methodology in public education; (3) to participate in elementary research through interpretation of available data bearing on curriculum revision; and (4) to give practice in identifying and discussing current issues, problems, practices, innovations, and trends in the total area of the development of curriculum theory. Offered in the Winter Quarter.

**480H. Honors Senior Thesis.** (3) The student will be allowed freedom of choice in selecting a topic for his Honors thesis. The topic may, for example, be related to his major field of interest or to a colloquium. His choice must, however, be approved by the Honors Advisory Committee. In so far as possible, advisors for the Honors thesis will be members of the Honors faculty. The student will select his topic in the Fall Quarter of his senior year, complete his thesis by the beginning of the Spring Quarter, and defend it before the Honors Advisory Committee and such other persons who may be invited to sit with the Committee.

**481H. Honors Senior Colloquium.** (3) Lectures, discussions, and student writing based on the central theme "The Educated Man." Original work and interpretations and adaptations of original works are bases for discussions. The course is conducted by two members of the Honors faculty. Offered in Fall Quarter.

**482H. Honors Social Welfare.** (3) An opportunity for student to do independent study in examining current problems related to the social work profession and the field of Social Welfare. Students are required to submit a senior essay on a topic of special interest to them. Limited to students with 3.0 average. Offered Spring Quarter.







## **SCHOOL OF EDUCATION**

**MALCOLM D. WILLIAMS, Ed.D., Dean**

### **Purposes of the School of Education**

The basic concept for preparing teachers for service and life has been utilized as the foundation element for the development of the purposes of the School of Education, which are:

1. To prepare elementary and secondary teachers, supervisors, and administrators.
2. To provide opportunities for students to pursue research in the problems of education.
3. To assist graduates in finding teaching positions for which they are qualified and in advancing to better teaching positions after they have had teaching experience.
4. To provide students with opportunities for knowledge and understanding of the economic society in which they live and their relation and responsibility in such a society.
5. To provide a sound program of guidance and work cooperatively with the other departments and schools of the university implementing the program.

### **ORGANIZATION**

The School of Education is composed of seven (7) departments, two curricula, and courses in Administration and Supervision, Library Science, Secondary Education, Economics, and Special Education. It is organized as follows: the Department of Business Administration, the Department of Business Education, the Department of Administration, Curriculum and Instruction with a curriculum in Elementary Education and courses in Administration and Supervision, Library Service, Secondary Education, and Special Education; the Department of Art, the Department of Music, the Department of Health, Physical Education and Recreation; and the Department of Psychology.

The School of Education has established, through cooperative agreements, student teaching centers in the school systems of Chattanooga, Memphis and Metropolitan Nashville-Davidson County. Other school systems in the state of Tennessee, also, assist with the student teaching program.

### **Advisory System**

Upon being admitted to the University, each student is assigned by the Registrar on a basis of the student's choice of school to the Dean of that school who refers the student to the head of the major department for guidance.

The duties of the adviser are to assist the student in selecting his subjects so as to secure a well-rounded education, as well as to aid in interpreting the requirements in their proper sequence.

The responsibility for the selection of courses rests, in the final analysis, upon the student; and it is not the province of the adviser to refuse approval of the course which the student is entitled to elect. Similarly, it is the primary duty of the student to pursue courses in their proper order to meet the requirements for graduation in the senior year. When the student registers for each quarter, he is required to consult his adviser on all schedules to be pursued. The student is urged, further, to confer with his adviser frequently, at least monthly, during each quarter.

Major advisers are members of the staff of the department in which the student is doing his major work. Major advisers counsel students on curricular and life adjustment problems.

In an effort to provide a highly effective and efficient guidance program, use is made of the following techniques: conferences, interviews, rating scales, personality tests, senior standing blanks, and a cumulative folder for each student of the School of Education.

### **Teacher Placement**

The School of Education does not maintain a placement bureau separate from that of the University. The School of Education cooperates with the University Placement Bureau in assisting its graduates in securing teaching and administrative positions.

Every graduating senior is required to register with the University Placement Bureau which is located in the Student Union. No service charge is made by the Bureau of students, employees, and alumni of the University.

## Public Services

Throughout the year the School of Education receives many requests for services from local, county, and state agencies. In an effort to meet these requests, the following services are provided: (1) cooperation with the state in-service program in conducting short courses and summer work-conferences, (2) consultative services on local problems to school personnel throughout the State by university staff members, (3) development and distribution of materials to school personnel, and (4) cooperation with the State Department of Education in the administration of the State-wide Testing Program.

## Curriculum Laboratory

The Curriculum Laboratory was organized at the University in the fall of 1952. The laboratory is located in Room 208 in the Education Building.

## Functions of General Education

Much discussion has been held about the purpose, nature, content, and characteristics of General Education. The issues, which seem to be well defined, are centered around the characteristics of general education rather than around the content. General Education as conceived at the Tennessee Agricultural and Industrial State University is designed to develop in students those skills, understandings, attitudes, and values which will equip them for effective living and responsible citizenship in a democratic society.

The types of General Education envisioned by the University seek to provide students with an opportunity to become acquainted with broad areas of subject matter, to aid them in the discovery of their own interests and abilities, and to equip them to live more effectively with themselves and with others as citizens of a democracy.

In order that the students at the Tennessee Agricultural and Industrial State University might participate effectively in the benefits to be derived from a general education, the University has revised its curriculum to provide for its students a 63 hour program, as minimum, to be taken from the General Education Core.

The general education courses may be taken from the following areas:

	Quarter Hours
Communication .....	9
Health, Physical Education, Personal Development, and Home and Family Living .....	9
Humanities .....	15
Natural Sciences .....	12
Social Studies .....	12
Fundamental Concepts of Mathematics .....	6

### **General Competencies Sought in General Education:**

The prospective teacher should possess the ability to:

1. Improve and maintain his own health and assume his share of responsibility for protecting the health of others.
2. Communicate effectively through reading, writing, speaking, and listening.
3. Attain emotional and social adjustment through the enjoyment of a wide range of social relationships and through the experience of working cooperatively with others.
4. Think logically, relatively, and imaginatively.
5. Discriminate among moral and spiritual values and apply these values in day-to-day relationships.
6. Accept the responsibilities and exercise and privileges of democratic citizenship.
7. Appreciate beauty as it appears in nature, in literature, in music, and in the graphic and practical arts; and find means of creative expression in the arts.
8. Study and learn.
9. Understand his natural environment and its relationship to human welfare.
10. Develop an awareness of the greatness of man and of the essential oneness of men of all ages, nations, races, and creeds.





## GENERAL INFORMATION ON THE TEACHER EDUCATION PROGRAM

University Undergraduate Council on Teacher Education Objectives:

1. To help provide and perpetuate an institutional climate favorable to the healthy growth of a teacher and education program.
2. To develop and administer teacher policies which will offer reasonable assurance that only persons of professional promise are prepared and recommended for entry into the teaching profession.

The function of the Undergraduate Council on Teacher Education for Tennessee State University is to develop policies, and ways for implementing them, relating to admission, retention, counseling, records, curricula, and standards for completion of program in teacher education and to recommend the policies and ways for implementing them to the Dean of Faculty and the President of the University.

The Committee is composed of nine members as follows: Graduate School—1, School of Agriculture and Home Economics—1, School of Arts and Sciences—3, School of Education—2, School of Engineering—1, and the Dean of the School of Education who shall serve as Chairman of the Committee Ex-Officio and Director of Teacher Education. The Chairman of the Committee is the Director of Teacher Education and serves as the University's chief agent for undergraduate teacher education. He has the total responsibility for administering the teacher education policies approved by the Dean of the Faculty and President of the University.

The Office of the Director of Teacher Education shall approve all students who apply for candidacy to the undergraduate teacher education program and secure a record of each applicant showing that the applicant has met standards for candidacy to teacher education as required by the policies of the Committee. The curriculum head of each teacher education curriculum will be informed of the students approved for the teacher education program in his curriculum by the Director of Teacher Education.

His Office shall get grade reports periodically on each approved student in the undergraduate teacher education program. The heads of the several teacher education curricula shall inform the Director of Teacher Education through their respective deans of any students in their curricula who are not maintaining the teacher education program's retention standards. He will notify the students who are not meeting the retention requirements that they have one quarter in which to remove the deficiencies. Students who do not remove their deficiencies and meet the retention standards during the quarter of probation are subject to be dropped from the teacher education program.

## TEACHER EDUCATION ADMISSION TO CANDIDACY AND RETENTION STANDARDS

### Admission

1. Each student who desires to be a candidate for admission to the teacher education program will make application to the Director of Teacher Education the 3rd quarter of his sophomore year, after he has completed 80 hours of course work, including a minimum of 6 quarter hours of professional education courses (201 Foundations of Education and Psychology 242).
2. With his application there should be attached reports showing that the student has

Passed the sophomore and English tests.

A minimum of a 2.00 average at the end of the second quarter of the sophomore year.

Passed tests in oral and written expression.

A good character and personality rating.

An absence of uncorrectable physical and emotional handicaps deemed by the undergraduate Teacher Education Committee as being of major importance.

Candidates who are not approved for admission to teacher education and students who do not have a permanent or provisional certificate will not be permitted to enroll in the following courses: Ed. 301, 387, 462; Psy. 312, 463 and all method courses.

A student will not be admitted to the upper division courses until he has completed all lower division courses.

A student has 3 years in which to complete his lower division courses.

## **Retention**

To remain in the teacher education program the student must:

1. Maintain University scholarship standards.
2. During the third quarter of the junior year (minimum of 128 quarter hours) candidates shall take the Teacher Education Examination. The candidate must show acceptable performance on the test before being admitted to student teaching.
3. Make application for student teaching through the teacher education curricula heads to the Director of Student Teaching the 3rd quarter of the junior year (minimum of 128 quarter hours). With the application should be attached reports showing that the student has

Met all teacher education program requirements to date.

Obtained a minimum grade point average of 2.25 in the courses in his teaching field with not less than a grade of C in all method courses.

Completed the prescribed prerequisite with professional education courses and  $\frac{3}{4}$  of the prescribed courses in his major area of specialization.

Participated in a September Field Experience.

Passed a physical examination showing that he is free of any communicable diseases.

4. All students are required to carry a maximum of 15 quarter hours of student teaching and method courses, and obtain a grade point average of 2.4. Students are not permitted to do student teaching in the community in which they live. Students who complete all requirements and make a "D" in Student Teaching may graduate from the University, but will not be recommended for certification.

Note: Students are permitted to take each of the tests stated above only three (3) times. Students have to pass all the tests the quarter before they apply to do student teaching. Example: Students who pass all tests the Fall Quarter may make application the Winter Quarter to do student teaching the Spring Quarter. Students must observe in the public schools while they are taking method courses 321, 322, 324, and 371. Tuesday and Thursday mornings should be left free for these observations.

## **THE SEPTEMBER FIELD EXPERIENCE**

The prospective student teacher is expected to participate in the September Field Experience. The September Field Experience provides opportunities for the student to serve as an assistant staff member in a school of his choice near his home before the University's Fall Quarter begins. This experience, which lasts for two or three weeks, helps the prospective teacher to find out what teaching is like. It often helps him to answer some personal questions about his career choice. In addition to providing beginning preparation for later participation experiences and for student teaching, it also helps students acquire background for their professional courses. In fact it is the strand of experience which often gives real meaning to other components of the program. Each student will be given guide sheets and assigned to a school. He is to return the guide sheet and his log book to the Director of Education after having had the September Field Experience.

## **Department of Administration, Curriculum, and Instruction**

**TILLMAN V. JACKSON, Ed.D., Head**

### **General Statement**

The Department of Administration, Curriculum, and Instruction is designed primarily for the training of teachers. It consists of a curriculum in Elementary Education, offering the Bachelor of Science degree; and courses in Secondary Education, Library Science, and Special Education.

The program of teacher education includes two broad areas of study: The General Education Program and the Professional Education Program.

The General Education Program, required of all departments in the School of Education, is described in the general introductory statement for the School of Education. The Professional Education program is presented below.

## Professional Education

The basic pattern of professional education needed for teaching has certain common elements which apply to problems which all teachers face irrespective of the age level of the pupils who are under their supervision. In addition, preparation for teaching on the different educational levels and in various curriculum areas requires specialized training appropriate to the different areas.

The basic pattern of professional education, therefore, includes (1) core professional courses required of all persons in teacher education and (2) specialized professional courses appropriate to the different areas.

### Core Professional Requirements

In planning the core professional program attention was given to those areas of study which are considered essential to the development of those understandings and competencies needed by all teachers. These areas include:

1. Orientation to the teaching profession: Historical, Philosophical, and Sociological Foundations of American Education.
2. Human Growth and Development, including an understanding of how children grow physically, emotionally, socially, and mentally, the nurture necessary for wholesome growth, and the relation between growth and acquiring or learning new behavior patterns.
3. The Psychology of Learning as applied to learning activities under the guidance of the school.
4. Understanding of School Organization, Administration, and Management.
5. Techniques of Measurement and Evaluation.
6. Skill in Curriculum Development.
7. School and Community Relations.
8. Classroom Guidance.

### Professional Education Core Requirements

The following courses are required of all persons enrolled in the teacher education program.

- Ed. 201—Foundations of Education
- Ed. 301—School Organization, Administration, and Management
- Ed. 387—Curriculum Development
- Ed. 462—School and Community Relations
- Psy. 242—Educational Psychology I, Human Development
- Psy. 243—Educational Psychology II, Psychology of Learning
- Psy. 312—Measurement and Evaluation in Public Schools
- Psy. 463—Guidance for Classroom Teachers

### Specialized Professional Education Requirements

The specialized professional education requirements vary according to the area of grades in which one seeks certification.

The specialized requirements, adapted to grades 1-9 or grades 7-12 include:

- (1) Materials and methods of teaching appropriate to the level of certification.
- (2) Supervised student teaching appropriate to an area of endorsement.

These specialized requirements are outlined under the areas to which they apply.

### Specialized Professional Education Requirements for Elementary Education Majors

(Grades 1-9)	Credits
Ed. 381 —Early Childhood Education .....	3 qr. hrs.
Ed. 472e—Student Teaching in the Elementary Schools .....	15 qr. hrs.
(Includes Seminar and Principles of Teaching)	
Three courses from the following (3 quarter hours each) ...	9 qr. hrs.
Ed. 321 —Teaching Arithmetic in the Elementary School	
Ed. 322 —Teaching Language Arts in the Elementary School	
Ed. 323 —Teaching the Social Studies in the Elementary School	
Ed. 324 —Teaching Reading in the Elementary School	

Total ..... 27 qr. hrs.

A minimum grade of "C" must be earned in each of the Specialized Professional courses.





## **Specialized Professional Education Requirements for the Secondary Level**

(Grades 7-12)

Ed. 371—Methods Course in the Special Subject Area

Ed. 472s—Student Teaching and General Methods on the Secondary School Level

## **General Requirements for Student Teaching**

### **472e and 472s**

All students desiring to enroll in Student Teaching (472e or 472s) must meet the following general requirements:

1. File application for student teaching one quarter prior to the one in which he wishes to enroll in student teaching.
2. Must be classified as a senior (144 or more quarter hours).
3. Have a scholastic average of at least 2.25 in the teaching field courses with a minimum grade of C in all methods courses.
4. Meet all course and classroom observation prerequisites.
5. Receive certification from health authorities that no serious physical condition detrimental to the welfare of the children exists.
6. Show evidence of emotional stability.

## **Curriculum in Elementary Education**

Elementary education is one of the curricula in the Department of Administration, Curriculum, and Instruction set up by the University as its agency for the professional preparation of teachers in the field of elementary education. The Bachelor of Science degree is awarded upon the satisfactory completion of this curriculum. Those who complete this program are qualified for State teacher certification in elementary education.

## **Program for Teachers of the Kindergarten**

This program includes the approved program for grades 1-9. Students desiring kindergarten certification in addition to certification in grades 1-9 must include, as a part of Education 472e Student Teaching in the Elementary School, 140 hours of teaching on the kindergarten level.

## **General Requirements for the Bachelor's Degree in Elementary Education**

All candidates for the Bachelor of Science degree must complete a minimum of 198 quarter hours (with a minimum average of 2.0) which include:

1. The General Core Including Subject Matter Concentration (114 quarter hours)
2. The Professional and Specialized Education Core (55 quarter hours)
3. The Minor Area Program (Minimum 18 quarter hours)
4. Electives and/or Additional Minor Area Courses (9 quarter hours)
5. Senior Project—Education 450 (3 quarter hours)

## SUMMARY OF COURSES REQUIRED FOR A MAJOR IN ELEMENTARY EDUCATION

1. General Education Core Including Subject Matter Concentration (114 Quarter Hours)
  - (A) Language Arts (18 Quarter Hours)
    - (a) English 101, 102, 103 ..... 9 qr. hrs.
    - (b) Speech 201, 202 ..... 6 qr. hrs.
    - (c) Library Service 211 ..... 3 qr. hrs.
  - (B) Natural Sciences (18 Quarter Hours)
    - (a) Science 121, 122, 123 (or)
    - (b) Biology 101, 102, 103 (or)
    - (c) Chemistry 111, 112, 103 (or)
    - (d) Physics 211, 212, 213 ..... 12 qr. hrs.
    - (e) Science 301, 302 ..... 6 qr. hrs.
  - (C) Humanities (24 Quarter Hours)
    - (a) Art 133 ..... 3 qr. hrs.
    - (b) Art 241 (or) 131, 301, 121, Related Art 201 ..... 3 qr. hrs.
    - (c) Music 131 ..... 3 qr. hrs.
    - (d) Music 301, 302 ..... 6 qr. hrs.
    - (e) English (Literature) 211, 212 ..... 6 qr. hrs.
    - (f) English (Children's Literature) 261 ..... 3 qr. hrs.
  - (D) Health & Physical Education (18 Quarter Hours)
    - (a) Physical Education 11, 12, 13 ..... 3 qr. hrs.
    - (b) Physical Education 20-50 (select 3) ..... 3 qr. hrs.
    - (Any one-hour course in R.O.T.C. may be substituted for any one hour of physical education for a maximum of six courses—male or female)
    - (c) Health ..... 12 qr. hrs.
    - (Select any four courses from the following: Health 151, 211, 212, 301, 302, 213, Nutrition 212, Physical Education 243)
  - (E) Social Studies (27 Quarter Hours)
    - (a) History 201, 202 ..... 6 qr. hrs.
    - (b) Political Science 221 or 222 or 223 ..... 3 qr. hrs.
    - (c) History 341 or 342 or Pol. Sci. 313 ..... 3 qr. hrs.
    - (d) Geography 171, 172, 173 (select 2) ..... 6 qr. hrs.
    - (e) History 121, 122, 123 (select 2) ..... 6 qr. hrs.
    - (f) Sociology 211 or Economics 201 or Anthropology 221 ..... 3 qr. hrs.
  - (F) Mathematics (9 Quarter Hours)
    - (a) Mathematics 111, 112 ..... 6 qr. hrs.
    - (b) Mathematics 103 ..... 3 qr. hrs.

## OTHER REQUIREMENTS

- (a) Passing Score on the English Proficiency Exam.
- (b) Passing Score on the S.T.E.P.
- (c) Passing Score on the Departmental Oral and Written Exam.
- (d) Qualify and be admitted to the Third Year Program in Teacher Education (by application after requirements a, b, and c have been met).
- (e) Satisfactorily complete a "September Field Experience."
- (f) Enroll and satisfactorily matriculate in the student-teaching orientation seminar.
- (g) Passing Score on the Teacher Education Exam.
- (h) Qualify and be admitted to the Student-Teaching Program (by application after requirements a, b, c, d, e, and g have been met. Also, at this time, the student must have completed three-fourths of all course requirements with a minimum grade of "C" in all specialized professional education courses,\* a minimum accumulative grade point average of 2.00 for all courses completed and a minimum accumulative grade-point average of 2.25 in all specialized professional, core professional and minor area courses collectively).
- (i) Enroll in Education 472e (Student-Teaching—15 hours) and satisfactorily complete this requirement.

\*A student may be enrolled in these at the time of application.



### The Minor for Elementary Education Majors

In addition to the 114 quarter hours comprising the general core and subject matter concentration, the 55 quarter hours of core and specialized professional education, the 3 hours of senior project (Education 450); the student must complete a minimum of 26 additional quarter hours to satisfy the 198 quarter hour minimum for graduation.

Every elementary education major must have a minor. The minor will consist of not less than 18 quarter hours of work in an area in addition to any and all course work specified in the core and specialized professional education, the general core and subject matter concentration, and the senior project.

Generally speaking, each student will select a minor and, when specified in the Bulletin, will satisfy the minor requirements as specified by the major department.

### Suggested Minors

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| 1. Aerospace Studies (A.F.R.O.T.C.) | 18. German                        |
| 2. Agricultural Education           | 19. Health and Physical Education |
| 3. Agricultural Engineering         | 20. History                       |
| 4. Agronomy                         | 21. Home Economics                |
| 5. Animal Husbandry                 | 22. Horticulture                  |
| 6. Art—Related and Interior Design  | 23. Industrial Arts               |
| 7. Business Administration          | 24. Library Science               |
| 8. Business Education               | 25. Mathematics                   |
| 9. Chemistry                        | 26. Music                         |
| 10. Child Development               | 27. Physics                       |
| 11. Clothing and Textiles           | 28. Political Science             |
| 12. Economics                       | 29. Psychology                    |
| 13. English                         | 30. Spanish                       |
| 14. General Science                 | 31. Special Education             |
| 15. Foods and Nutrition             | 32. Speech and Drama              |
| 16. French                          | 33. Social Studies                |
| 17. Geography                       | 34. Sociology                     |

### Curriculum Sequence

The curriculum sequence for each year level is presented. Each student is required to secure the approval of his faculty adviser in the Department of Administration, Curriculum, and Instruction concerning his program of work.



# Recommended Course Sequence for the Elementary Education Curriculum

## Freshman Year

Name of Course	Quarter			Quarter Hours
	I	II	III	
English .....	101	102	103	9
American History and Government ...	201	202	221	9
Aerospace Studies (or) .....	151	152	153	3
Physical Education .....	11	12	13	
Freshman Assembly .....	FA	FA	FA	0
Education, Art, Music .....	101	133	131	7
Health .....	151	211	212	9
Geography, Library Service .....	171	172	211	9
	14	16	16	46

## Sophomore Year

Sign up to write English Proficiency, S.T.E.P., and Departmental Exam during Third Quarter of Sophomore Year.

English .....	211	212	261	9
Education, History .....	201	121	122	9
Aerospace Studies (or) .....	251	252	253	3
Physical Education .....	20-50	20-50	20-50	
*Mathematics .....	111	112	103	9
*Sociology, Psychology ..	211	242	243	9
*Science .....	121	122	123	12

## Junior Year

Name of Course	Quarter			Quarter Hours
	I	II	III	
Minor Subject .....	3	3	3	9
Minor, Music, Education .....	3	3	381	9
Music, Education .....	301	302	321	Select 9
Health, Education .....	302/301	310	322	Three 9
History, Education .....	341	387	323	Plus 9
Education, Psychology, Education ...	301	312	324	Elective 9
	18	18	18	54

## Senior Year

Speech, Education, Speech .....	201	472e	202	9
Science Education, Science .....	301	472e	302	9
Art, Education, Minor .....	241/301	472e	3	9
Education .....	462	472e	450	9
Psychology, Education, Minor .....	463	472e	3	9
Minor .....	3			3
	18	15	15	48

\*Consider your minor area before selecting these. Math 161, 162, 163 should be selected for students who desire a science or mathematics minor. Also, Biology 111, 112, 113 or Chemistry 111, 112, 113 may be more appropriate for persons desiring minors in agriculture science, or other areas such as speech and drama. Business or economics should substitute Economics 211 for Sociology 211. Take Teacher Education Exam, do September Field Experience. Enroll in Education 472 by the end of 1st quarter of senior year.

## SPECIAL EDUCATION

The education for teachers of exceptional children satisfies one of the great needs of our present day society, in that it provides for adequate training and experiences which will enable the prospective teacher to understand and guide the exceptional child adequately. Every child must have equal educational opportunities to develop to his maximum potentialities. The exceptional child needs special educational services in accordance to his peculiar needs and abilities. According to recent statistical reports there is an increasing demand for well qualified teachers in all areas of exceptionality, and most especially in the area of the educable mentally retarded. The School of Education, Tennessee State University, in accordance with its ideals and purposes, has expanded its teacher education offerings to include a program in the area of mental retardation.

Students who pursue the program in special education must also meet all of the requirements of the teacher education program for elementary certification.

## COURSES FOR TEACHERS OF THE MENTALLY RETARDED

### Specialized Courses—

Ed. 465—Introduction to Special Education .....	3 hrs.
Ed. 467—Characteristics and Needs of the Mentally Retarded .....	3 hrs.
Ed. 469—Vocational Guidance of the Mentally Retarded .....	3 hrs.
Ed. 471—Methods and Materials for Teaching the Mentally Retarded .....	3 hrs.
Ed. 473—Observation, Participation, and Teaching Mentally Retarded .....	3 hrs.

### Related Courses (6 hours of Electives)

Psy. 323—Mental Hygiene .....	3 hrs.
Soc. 452—Sociology of Child Development .....	3 hrs.
Psy. 462—Psychological Testing (Required) .....	3 hrs.

## LIBRARY SERVICE

LOIS H. DANIEL, M.A., Coordinator

The Library Service program may be elected as a minor field of concentration by students taking a major in any department of the institution. In general the student begins his library training at the junior level. However, upon approval of his major advisor, he may be permitted to take no more than two courses at the advanced sophomore level. During his junior and senior years he can complete requirements by taking one or two courses in each term.

The library service curriculum provides training for the following groups: (I) students who wish to prepare for library positions in elementary and secondary schools; (II) students who plan to enter a graduate library school after receiving the bachelor degree; (III) in-service teachers, administrators, and prospective teachers who desire information on library materials related to their teaching needs; (IV) students who wish guidance in the use of library resources.

### Group I—Requirements

Students pursuing a teacher education program on either the elementary or secondary level may elect library service as a minor so as to qualify for positions as teacher-librarians or school librarians. Those who wish to qualify as teacher-librarians should complete the following courses: Library Service 361, 362, 363, 441, 451 and 452. Those who wish to qualify as school librarians must complete the following additional courses: Library Service 341, 463 and 483 or Ed. 473.

### Group II—Requirements

Students preparing to enter a graduate library school for further training should complete all courses offered in the department. In addition they should acquire at least a reading knowledge of two modern foreign languages, preferably French and German. Language requirements vary in graduate library schools. Some schools require two years of college credit in the designated languages, while others may waive such requirements altogether, depending upon the kind of library work the student chooses for specialization.

### Group III—Requirements

In-service teachers, administrators, and prospective teachers may enroll in library service courses even though they do not plan to complete a minor. It is recommended that they take courses dealing with materials.

### Group IV—Requirements

Students seeking guidance in the use of library resources should elect Library Service 211 as early as possible in their first two years of academic training.

### COURSES FOR A MINOR IN LIBRARY SERVICE

Name of Course	Quarter		
	I	II	III
Library Service 362 .....	3		
Library Service 363 .....		3	
Library Service 361 .....			3
Library Service 341 .....	3		
Library Service 441 .....	3		
Library Service 451 .....		3	
Library Service 452 .....		3	
Library Service 463 .....			3
Library Service 483 or Ed. 473 .....			3
Courses required for a minor will be offered in both Summer terms.			
ELECTIVE COURSE			
Library Service 211 .....	3	3	

### THE DEPARTMENT OF MUSIC

EDWARD C. LEWIS, Ph.D., Head

#### General Statement

The Department of Music is organized to serve the State's music education structure through teacher education, leadership, and statewide cooperation; to provide sound guidance and thorough training for the gifted student whose career goal is professional music; and to bring the gift of music in exhibits, lecture demonstrations, concert offerings and participation opportunities to all its people, as its contribution to the cultural enrichment of the campus, the community, and the state families.

The courses are designed to provide experiences leading to general culture, a mastery of fundamental tools, adequate performance ability, and the science and art of teaching.

The undergraduate program in Music leads to the Bachelor of Science degree in Music Education. The minimum number of quarter hours required for the Bachelor of Science degree in Music Education is 198. The minimum number of quarter hours in Music required is 98. The minimum of quarter hours in 300 and 400 level courses required for both the major in music education and for graduation is 66.

The Department of Music holds full membership in the National Association of Schools of Music.

### MUSIC EDUCATION

#### Method of Instruction

Courses in applied music are taught by means of private lessons. Beginning instruction in voice, piano, and in the string and wind instruments is offered in the group instruction method. Academic classes are taught by means of the lecture and project system with laboratory sessions as required or desirable. Upon entry and at the end of each academic year the student's accomplishment level or potential is evaluated by a jury of staff members and he is assigned to a teacher for private or class instruction. Progress is determined through examination by a jury and is based upon the student's native talent, technical advancement, and repertoire. All courses in music, whether applied or academic, must be passed with a grade of "C" or above. Each student will be expected to repeat courses in which a grade of "D" or below is earned until the grade of "C" or above is achieved. All music majors must take Comprehensive examinations in music theory, music history, music education, and applied music prior to practice teaching or during the final quarter of matriculation at the University. The time and place of these examinations will be announced periodically.





### **Applied Music**

Applied music is defined as instruction and preparation in voice and the various instruments. Courses are offered in voice, piano, organ, violin, viola, violincello, string bass, flute, oboe, clarinet, bassoon, saxophone, French horn, cornet (trumpet), trombone, tuba, and the percussion instruments. Each student must declare a major applied area of performance and must concentrate in this area for the equivalent of four years, and must present a senior recital during the senior year. It is expected that each student will make numerous appearances on seminars and student recitals during the freshman, sophomore, and junior years. For all students majoring in some instrument other than piano, it is expected that piano will be the minor performance area. In most instances the choice of the major applied area and curriculum will be governed by the proficiency that the student has achieved prior to entering the University.

### **Ensemble**

Membership in music ensemble groups is open to all students of the University who qualify for admission and participation. Each music major is required to participate in a major ensemble group for the entire four years of his matriculation. Membership is not limited to one ensemble, but instrumental majors must participate in University Band and Vocal majors must participate in University Choirs. One credit per quarter is offered for each group.

The following ensembles are offered:

University Choir, Chapel Choir, Men's Glee Club, University Band, Brass Choir, Stage Band, and String Ensemble. These groups are organized to study and perform the standard repertoire of the various combinations of voice or instrument.

### **Concerts and Recitals**

Organized music groups, small ensemble groups, faculty and student soloists offer concerts and recitals frequently in the Recital Hall. These are open to the public without charge, and students are particularly encouraged to attend.

### **Lyceum Series**

Each year the University Lyceum Series sponsors an Artist Course, bringing to the campus and the community artists and ensembles of national prominence. This series along with the Faculty series provides a full and diversified musical calendar.

### **Teacher Education**

The essential orientation of the curriculum in music is that of the teacher education program. Opportunities for professional development and for artistic preparation are amply provided for within the general pedagogical framework.

# CURRICULA IN MUSIC EDUCATION

## CURRICULUM I

### Teacher Education

#### Piano Major

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
Mathematics 111, 112	3	3	
Music 131			3
Music 120-1-2	4	4	4
P. E., AFROTC	1	1	1
Music 104-5-7	1	1	1
Choir or Band	1	1	1
Music 11a, b, c	1	1	1
Music 191-2-3	1	1	1
	15	15	15

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Music 337-8-9	3	3	3
English 211-2-3	3	3	3
Ed. 301, Psy. 312, Ed. 387	3	3	3
Music 108-134-135	1	1	1
Music 320-21, S.S. 114	3	3	3
Choir or Band	1	1	1
Music 31a, b, c	2	2	2
Music 371a, b, 304	3	3	3
	19	19	19

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Science 121-2-3	4	4	4
Music 220-1-2	3	3	3
Hist 201, 202			
Pol Sci 221	3	3	3
Art 133		3	
Ed. 201, Psy. 242-43	3	3	3
P. E., AFROTC	1	1	1
Choir or Band	1	1	1
Music 21a, b, c	1	1	1
	16	19	16

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Music 420-21	3		3
Music 430			3
Health 211	3		3
Ed. 462, Ed. 471-2	3	15	
Choir or Band	1		1
Mus. 305, 371, 451	3		5
Music (applied)	2		2
Soc. Stud. Elective			3
	15	15	17

## CURRICULUM II

### Teacher Education

#### Voice Major

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
Mathematics 111-112	3	3	
Music 131			3
Music 120-1-2	4	4	4
P. E., AFROTC	1	1	1
Music 104-5-7	1	1	1
Choir	1	1	1
Music 14a, b, c	2	2	2
Music 11a, b, c	1	1	1
	16	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Music 337-8-9	3	3	3
English 211-2-3	3	3	3
Ed. 301, Psy. 312, Ed. 387	3	3	3
Music 108-134-135	1	1	1
Music 320-21, 305	3	3	3
Choir	1	1	1
Music 34a, b, c	2	2	2
Mus. 371a, Mus. 304			
Ed. 462	3	3	3
	19	19	19

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Science 121-2-3	4	4	4
Music 220-1-2	3	3	3
Hist 201, 202	3	3	
Pol Sci 221			3
Ed. 201, Psy. 242, 243	3	3	3
P. E., AFROTC	1	1	1
Choir	1	1	1
Music 24a, b, c	2	2	2
Music 21a, b, c	1	1	1
	18	18	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Music 420-21	3		3
Music 430			3
Health 211, Art 133	3		3
Music 428			3
Ed. 462, Ed. 471-2	3	15	
Choir	1		1
Soc. Stu. Elective	3		
Mus. 371, 451	3		2
Music (applied)	2		2
	18	15	17



### CURRICULUM III

#### Teacher Education

#### Instrumental Major

Freshman Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 101-2-3	3	3	3
Music 131, Art 133	3	3	
Math 111			3
Music 120-1-2	4	4	4
P. E. AFROTC	1	1	1
Music 104-5-7	1	1	1
Band	1	1	1
Music 11a, b, c	1	1	1
Major Applied	2	2	2
	16	16	16

Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Music 337-8-9	3	3	3
English 211-2-3	3	3	3
Ed. 301, Psy. 312,			
Ed. 387	3	3	3
Music 108-134-135	1	1	1
Music 320-21, S.S. 114	3	3	3
Band	1	1	1
Music 371a, 371b,			
Music 304	3	3	3
Major Applied	2	2	2
	19	19	19

Sophomore Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Science 121-2-3	4	4	4
Music 220-1-2	3	3	3
Hist 201, 202	3	3	
Pol Sci 221			3
Ed. 201, Psy. 242-243	3	3	3
P. E. AFROTC	1	1	1
Band	1	1	1
Music 21a, b, c	1	1	1
Major Applied	2	2	2
	18	18	18

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Music 420-21	3		3
Music 430			3
Health 211			3
Math 112			3
Music 428	3		
Ed. 462, Ed. 472s	3	15	
Band	1		1
Major Applied	2		2
Music 305, 371, 451	6		2
	18	15	17



## CURRICULUM IN MUSIC

### Bachelor of Arts

This curriculum is designed to develop an understanding of man, of civilization, of contemporary society, of the prevailing scientific ideas, and of the art and craft of music. This program will provide an academic line of pursuit for those students interested and talented in music, but not particularly aiming for the profession of teaching.

General Education	81 hours
Music—Theory and Applied	97 hours
Electives	
Humanities (Select from Phil. 301, 323; Art 331, 332, 333; Drama 301, 302, 311, 312)	9 hours
General (Select from Health 301, 304; Psychology 221, 222; Social Studies; Speech 201)	9 hours

Total 196

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-102-103	3	3	3
History 201-202-203	3	3	3
Music 120-121-122	4	4	4
P. E. or AFROTC	1	1	1
Minor Piano	1	1	1
Major Ensemble	1	1	1
Math 111-2-3	3	3	3
	16	16	16

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
For. Lang.	3	3	3
Soc. Studies; Music 131, Art 133	3	3	3
Music 220-221-222	3	3	3
P. E. or AFROTC	1	1	1
Technique Class	1	1	1
Minor Piano	1	1	1
Major Ensemble	1	1	1
Literature 211-212-213	3	3	3
	16	16	16

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Science	4	4	4
For. Lang.	3	3	3
Music 320-321-305	3	3	3
Technique Class			1
Major Ensemble	1	1	1
Music 337-338-339	3	3	3
Phil. 323, Art 13, Elective	3	3	3
	17	17	18

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Music 433-434-435	3	3	3
Music 420-421-422	3	3	3
Music 430-431-428	3	3	3
Music 451			1
Major Ensemble	1	1	1
Elective	6	6	6
	16	16	17

### Department of Art

HIRAM V. GORDON, M.S., Head

#### General Statement

The Art Curriculum, with emphasis on Art Education, has these objectives: (1) to offer courses which stimulate students to learn about art, and express themselves creatively as a part of their cultural growth; (2) to guide students in the understanding of the importance of art experience in public school education, and life in general; (3) to guide students in the realization of the many ways that art affects their daily living; (4) to acquaint students with the arts of all people through assigned reading, observation and visual aids; (5) to show the relationship of art to other fields of learning; (6) to counsel and encourage students who show interest and ability for artistic growth to continue the study of art in its various forms so as to be instrumental in placing art education in the public school curriculum on a level with other school subjects; (7) to effectively employ the use of leisure, and to develop creative productions.

## Departmental Requirements

The Department offers a major in Art Education leading to the degree of Bachelor of Science in Education, the curriculum for which is listed below.

The minimum number of quarter hours required for the Bachelor of Science Degree in Art Education is 198. The minimum number of quarter hours in Art required is 66 of which 36 hours are on the 300 and 400 levels. The minimum number of quarter hours of 300 and 400 level courses required for graduation is 66.

1. Art Majors should earn at least a grade of "C" in courses taken in the department, otherwise the course in question must be repeated.
2. Art Majors may be required to repeat any of the supporting courses in which a grade of "D" has been received.
3. Art Majors who show evidence of fundamental weakness in an area of study may be requested by the head of the department, to take additional course work in the area.
4. All transfer students are expected to present a comprehensive portfolio of his (her) work.
5. Art Majors are expected to keep a comprehensive portfolio of his (her) work to be inspected periodically.
6. The department reserves the right to retain at least one example of the student's creative work in a given course.
7. All persons pursuing an organized program of study in the department are expected to participate in the program of the Art Guild.
8. Art Majors are expected to make at least two museum or gallery tours under the auspices of the Art Guild.

## Minor in Art

A minor in art consists of 27 hours of art, including courses in Art 101 (3 hrs.); 121 (3); 131 (3); 132 (3); 241 (3); 331 (3); 332 (3); and 333 (3).

An elective is to be selected from Art 350, 221, or 301.

## CURRICULUM FOR B.S. DEGREE WITH MAJOR IN ART EDUCATION

Freshman Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 101-2-3	3	3	3
Art 121-22-23	3	3	3
Social Studies 111-12-13	3	3	3
Phy. Ed. or Air Science			
11-12-13	1	1	1
Math 111-112	4	3	
Music 131			3
Art 101-31-32	3	3	3
Art 133			3
	17	16	19

Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Psychology 312	3		
Education 301, 387		3	3
Art 301-302	3	3	
Art 321-22-23	3	3	3
Art 331-32-33	3	3	3
French or Spanish 101-02-03	4	4	4
Art 241			3
Social Studies 114	3		
	19	19	19

Sophomore Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 211-12-13	3	3	3
Am. Hist. & Am. Gov. 201-02			
Am. Gov. 221-222-223	3	3	3
Phy. Ed. or Air Sci.	1	1	1
Natural Science	4	4	4
Psy. 242-243		3	3
Education 201	3		
Art 221-222-223	3	3	3
	17	17	17

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Education 472s			15
Psychology 463		3	
Art Ed. 371A-371b	3	3	
Senior Project 450		3	
Health 151	3		
Art 434	3		
Art 350-351	3	3	
Art 400	3		
Electives		3	
	15	15	15

## Department of Business Administration

LEWIS R. HOLLAND, M.C.S., Head

The curriculum in Business Administration is offered to those students who are planning for careers in accounting, insurance, financing, marketing, real estate, salesmanship, and other general business pursuits. The courses are designed to prepare students for leadership in our complex economy, and to provide professional education in the area of their choice.



### REQUIREMENTS FOR THE DEGREE

The bachelor of science degree is offered in business administration and is awarded for the attainment of knowledge and skills in business and related field demonstrated to the satisfaction of the university.\*

A meaningful program of study is provided. The nature and extent of this program, in general, depends upon the student's previous training and experience. Normally, one-third of the work is in the field of concentration, one-third in related fields, and one-third in general education and electives.

The student must complete at least forty-five quarter hours in the field of Business Administration with a major emphasis in accounting and general business. Required courses include: B.A. 323-327, 331-332, 335, 420-421, 450 and Econ. 301, 304, 315, 404-405, and 419. Sixty quarter hours must be completed in courses on the 300 and 400 levels. One hundred and ninety-five quarter hours are required for graduation.

The Department neither encourages nor approves the practice of course substitution in the required project core. Students are advised to follow the prescribed programs in their respective curricula, to enroll for courses on their grade levels and to take these courses in sequence. It is a departmental requirement that students earn a grade of "C" or better in all courses in the major field.

\* Basic knowledge of keyboard required, including typing at 40 words a minute. Optional: For those entering who have met above requirements.



# CURRICULUM FOR MAJORS IN BUSINESS ADMINISTRATION

## BACHELOR OF SCIENCE DEGREE

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
B. A. 101	3		
B. A. 102		3	
English 101-2-3	3	3	3
Natural Science 121-22-23 or Biology 101-2-3 or Chemistry 111-2-13	4	4	4
History 201-2-3	3	3	3
Art 133			3
Math 111-12-13	3	3	3
Phys. Ed. 11-12-13 or Air Sci. 151-52-53	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Acctg. 211-12-13	4	4	4
B. A. 201			3
Economics 211-12-13	3	3	3
Pol. Sci. 221-22	3	3	
Phys. Ed. 20-50 or Air Sci. 251-52-53	1	1	1
English 211-12-13	3	3	3
Philosophy or Music	3		
Electives		3	3
	<u>17</u>	<u>17</u>	<u>17</u>

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Acctg. 311-12-13	3	3	3
B. A. 335			3
B. A. 323-24-25	3	3	3
B. A. 331-32	3	3	
Econ. 301-304-315	3	3	3
Psy. 221-22	3	3	
English 321	3		
B. A. 326-27		3	3
	<u>18</u>	<u>18</u>	<u>15</u>

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
B. A. 425		3	
B. A. 420-21		3	3
B. A. 328		3	
B. A. 423 or 441	3		
B. A. 433-34	3	3	
Econ. 404-5-19	3	3	3
Psy. 311	3		
B. A. 450	3		
B. A. 422			3
Electives			6
	<u>15</u>	<u>15</u>	<u>15</u>

## A PROGRAM WITH EMPHASIS IN ACCOUNTING

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-02-03	3	3	3
Math 11-12-73	3	3	3
Natural Science 121-22-23 or Biology 101-02-03 or Chemistry 111-12-13	4	4	4
B. A. 101	3		
B. A. 102		3	
Art 133			3
Accounting 211-12-13	3	3	3
Acctg. Lab. 111-12-13	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Economics 211-12-13	3	3	3
Phil. or Music	3		
English 211-12-13	3	3	3
History 201-02-03	3	3	3
Psychology 221-22		3	3
Accounting 311-12-13	3	3	3
Electives	3	3	
Pol. Sci. 221			3
Phys. Ed. 11-12-13 or Air Science 251-52-53	1	1	1
	<u>19</u>	<u>19</u>	<u>19</u>

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
B. A. 323-24-25	3	3	3
Psy. 311	3		
B. A. 326-27		3	3
B. A. 335			3
English 321-22	3	3	
Accounting 400-01		3	3
Accounting 314-15-16	3	3	3
Economics (Elective)			3
Accounting 411-12	3	3	
Elective	3		
Phys. Ed. 20-50	1	1	1
	<u>19</u>	<u>19</u>	<u>19</u>

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
B. A. 450	3		
Accounting 413-14	3	3	
Economics 420-22		3	3
B. A. 423-24	3	3	
B. A. 433-34		3	3
Electives	9	6	12
	<u>18</u>	<u>18</u>	<u>18</u>
Electives:			
Econ. 301 (3)	Econ. 304 (3)		
Econ. 315 (3)	B. A. 328 (3)		
Econ. 403 (3)	B. A. 329 (3)		
Econ. 404 (3)	B. A. 425 (3)		
Econ. 419 (3)	B. A. 422 (3)		

## **Department of Business Education and Office Administration**

The Department of Business Education and Office Administration prepares students for teaching positions in secondary and continuation schools, and for administrative and clerical office positions.

Degree curricula are offered in teacher education with emphasis in stenography, general business, accounting and bookkeeping, and economics, and in office administration with emphasis on preparation for supervisory and executive level positions. Certificate programs are offered in stenographic and clerical occupations.

### **Requirements for the Undergraduate Degree**

A total of 198 hours is required for graduation. Seventy of the 198 hours must be completed in courses on the 300 and 400 levels; at least 30 of these 70 hours must be in the major field. A minimum of 45 hours is required for a major in Business Education or in Office Administration.

### **Requirements for Certificates**

The stenographic and clerical programs usually require two years. Students who possess considerable skill in some subjects may complete the requirements in less time. Awarding of the certificate is based on the student's demonstrated proficiency in his curriculum area.

### **Minors**

The Department offers minors in business education and in office administration. The minor requires a minimum of 36 hours in the area selected. The Department will plan the minor with a student according to his career objective.

### **Cooperative Education Program**

The Department has agreements with several industries through which students can alternate academic and work experiences. Students are considered employees of the industry and receive wages commensurate with their employment status.

### **Required Field Experiences**

Students majoring in business education engage in two types of field experiences: student teaching and office internship. Requirements for student teaching are the same as those set forth by the University Teacher Education Program.

Office internship is a senior level experience; students who wish to enroll in this course should satisfy the following prerequisites:

1. Have senior classification.
2. Have a cumulative average of at least 2.00.
3. Have performed satisfactorily (at a B level) on two stenographic tests.\*
4. Have satisfactorily completed all office administration courses in their chosen sequence.

### **Professional Affiliations**

The Department is a member of the National Association for Business Teacher Education.

Membership in Beta Psi Chapter of Pi Omega Pi, National Honorary Scholastic Fraternity in Business Education is available to prospective teachers on the basis of superior attainment during the first two years of college work. Membership in the University's chapter of the National Collegiate Association for Secretaries is available to all business education majors. Other professional affiliations available to students are Kappa Delta Pi, Alpha Kappa Mu, and Phi Beta Lambda.

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\* (Acceptable tests are the Atomic Energy Commission, Tennessee Valley Authority, Federal Civil Service, Union Carbide, and State Employment Tests. Other tests of equal repute will be considered by the Department.)

## REQUIREMENTS FOR A MAJOR IN BUSINESS TEACHER EDUCATION

### General Education

English 101-2-3	9
Science 121-22-23	12
Math 111-12-173	10
Mus. 131, Art 133, Hlth. 151	9
Phys. Ed.	6
English Lit. 211-12-13	9
Hist. and Soc. Stud.	12
Speech 221	3
<b>Total Hours</b>	<b>70</b>

### Business Core

Acct. 211-12-13	12
Bus. Ad. 101	2
Bus. Ad. 323-24-25 (Law)	9
Bus. Ad. 326 (Marketing)	3
O.A. 315 Bus. Communications	3
Bus. Ad. 441 (Mgt.)	3
Psy. 221	3
Econ. 211-12-13	9
Psy. 311	3
BE 450	2
<b>Total Hours</b>	<b>49</b>

### Field of Concentration

- A. General Business
- B. Accounting and Bookkeeping
- C. Economics
- D. Stenography

### Professional Education

Ed. 201	3
Psy. 242-43	6
Ed. 301-387	6
Psy. 312-463	6
Methods 371 AB	6
Stu. Tchg.	15
BE 400	3
<b>Total Hours (Required)</b>	<b>42</b>
<b>Electives</b>	<b>13</b>
<b>Total</b>	<b>198</b>

Total Hours (Required) 42  
Electives 13

Total 198

## TEACHER EDUCATION CURRICULUM IN BUSINESS EDUCATION

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
English 101-2-3	3	3	3
History 101-2-3	3	3	3
Math. 111-12-173	4	3	3
Mus. 131, Art 133, Health 151	3	3	3
P. E. 11, 12, 13	1	1	1
B. E. 101, BA 101	0		3
Subject Area	3	3	3
	<b>17</b>	<b>16</b>	<b>16</b>

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
English 211-12-13	3	3	3
Science 121-22-23	4	4	4
Econ. 211-12-13	3	3	3
Ed. 201, Psy. 242-43	3	3	3
Phys. Ed. Electives	1	1	1
Bus. Com. Subject Area	3	3	3
	<b>17</b>	<b>17</b>	<b>17</b>

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
Acctg. 211-12-13	4	4	4
BA 323-24-25	3	3	3
Subject Area	3	3	3
Psych. 311		3	
Soc. Studies			3
Edu. 301, 387	3	3	
BE 400			3
OA 201, Sp. 221	3	3	
	<b>16</b>	<b>19</b>	<b>16</b>

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
BE 371	3		
Psy. 312, 463	6		
Subject Area Elect.	3		3
BE 450	3		
BA 441	3		
BE 472		15	
OA 440			12
	<b>18</b>	<b>15</b>	<b>15</b>



## BUSINESS

The applicant shall offer a minimum of 27 quarter hours, including a core of 18 quarter hours in Accounting, Economics, and two of the following: Business Law, Introduction to Business, Business Mathematics, and Business Communications.

Applicants meeting the above requirements may secure single subject endorsements by completion of the hours indicated, including hours completed in the core:

General Business	9 quarter hours including introduction to business or business principles, business law, and business mathematics.
Bookkeeping	15 quarter hours.
Typewriting	9 quarter hours including 3 hours of advanced typewriting.
Shorthand	9 quarter hours including 3 hours of advanced shorthand.
Business Law	9 quarter hours.
Economics	18 quarter hours including principles and related subjects in that field.
Salesmanship	9 quarter hours selected from salesmanship, marketing, merchandising, advertising and retailing.
Secretarial Practice	3 quarter hours of office practice plus certification in shorthand and typewriting.
Business Machines	3 quarter hours.
Business English	3 quarter hours.
Business Arithmetic	9 quarter hours (6 in mathematics and 3 in business mathematics or 9 in business mathematics.)
Office or Clerical Practice	3 quarter hours in office, secretarial or clerical practice.
Consumer Education	3 quarter hours in consumer economics or consumer education.

## REQUIREMENTS FOR A MAJOR IN OFFICE ADMINISTRATION

### General Education Core

English 101-2-3	9
English 211-12-13	9
Science 121-22-23	12
Math 111-12-173	10
History 201-2-3	9
Music 131, Art 133, Health 151	9
Physical Education	6

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Total Hours . . . . . 64

### Office Administration Core

Off. Sys. Seq. 331-32-33	9
Mgt. Sequence 431-32-33	9
Bus. Commun. 315	3
Internship 440	4
Typewriting 221	4

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Total Hours . . . . . 28

### Required Business Core

BA 101-2	6
Accounting 211-12-13	12
Economics 211-12-13	9
BA 323-24-25	9
BA 335	3
BA 326, 441	6
Psy. 311	3
OA 450	2
Psy. 221-22-341	9

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Total Hours . . . . . 59

### Select 21 Hours: (To complete Office Administration Requirement)

Machine Processes and Problems 201	3
Shorthand 204-5-6; 304	12
Machine Dictation	3
Executive Office Procedures 334	3
Internship 441, 442	8
Specialized Transcription 305	3

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Total Hours . . . . . 48

Electives . . . . . 27

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Total Hours Required for Graduation . . . . . 198

## OFFICE ADMINISTRATION CURRICULUM IN BUSINESS EDUCATION

Freshman Year Name of Course	Quarter Hours Credit		
	I	II	III
English 101-2-3	3	3	3
Math 111-112-173	4	3	3
OA Typewriting	2	2	
Music 131, Art 133, Health 151	3	3	3
Science 121-22-23	4	4	4
P.E. 11, 12, 13	1	1	1
OA 101, BA 101	0		3
	<u>17</u>	<u>16</u>	<u>17</u>

Sophomore Year Name of Course	Quarter Hours Credit		
	I	II	III
English 211-12-13	3	3	3
Economics 211-12-13	3	3	3
*History 201-02/03	3	3	
*Am. Govt. 221-22-23			3
Acctg. 211-12-13	4	4	4
OA Sequence	3	3	3
P. E. Electives	1	1	1
	<u>17</u>	<u>17</u>	<u>17</u>

Junior Year Name of Course	Quarter Hours Credit		
	I	II	III
OA 323-24-25	3	3	3
OA Sequence	3	3	3
OA 315, Speech 221 BA 201	3	3	3
Psy. 221, 222	3	3	
OA 331-32-33	3	3	3
OA Electives	3	3	3
	<u>18</u>	<u>18</u>	<u>15</u>

Senior Year Name of Course	Quarter Hours Credit		
	I	II	III
OA 431-32-33	3	3	3
BA 335, Psy. 341	3	3	
OA 450, Psy. 311	3	3	
BA 326, 441	3	3	
BA 331	3		
OA Electives	3	3	
OA 440-441-442			12
	<u>18</u>	<u>15</u>	<u>15</u>

### TECHNICAL OFFICE OCCUPATIONS

The basic objective of the technical office occupations program is to equip each student with sufficient knowledges and skills to enter an office job and to perform satisfactorily on the job.

The program is designed to develop marketable job skills in clerical and stenographic occupations.

When the trainee has completed the requirements of the program, he is presented a certificate which indicates the type of training he has received and the level of proficiency he has achieved.

### STENOGRAPHIC CURRICULUM

First Year	Credit Hours
OA11-12 Introduction to Business	6
OA111-112-113 Beginning and Intermediate Typewriting	2
OA31-32-33 Clerical Training	9
OA204-205-206 Beginning and Intermediate Shorthand	9
OA61-62-63 Business Communications	9
OA71 Personal-Social Relations	2
Second Year	
OA21-22 Record Keeping	6
OA201 Office Machines	3
OA221 Production Typewriting	4
OA304 Advanced Shorthand and Transcription	3
OA41 Records Management	3
OA51 Intensive Employment Review	3
OA34-35-36 Office Procedures and Practice (Including Internship)	18
Speech 221 Business and Professional Speech	3
OA72 Office Relations and Etiquette	2

\*Elect 9 hours from Am. History/Government.

## CLERICAL CURRICULUM

### First Year

OA11-12 Introduction to Business	6
OA21-22-23 Record Keeping	9
OA31-32-33 Clerical Training	9
OA61-62-63 Business Communications	9
OA111-112-113 Beginning and Intermediate Typewriting	6
OA71 Personal-Social Relations	2

### Second Year

OA201 Office Machines	3
OA221 Production Typewriting	4
OA41 Records Management	3
OA51 Intensive Employment Review	3
OA34-35-36 Office Procedures and Practice (Including Internship)	18
OA72 Office Relations and Etiquette	2
Speech 221 Business and Professional Speech	3

### Department of Health, Physical Education and Recreation

E. PRESTON MITCHELL, Ph.D., Head and Chairman of the Graduate Division

AUDREY E. LEWIS, Ed.D., Chairman of the Upper Division

HARRISON B. WILSON, H.S.D., Chairman of the Lower Division

The curriculum in the Department of Health, Physical Education and Recreation is designed to serve all students in the University by contributing to their health, organic vigor, and good mental and physical habits. The Department aims: (1) to provide incentives for students to engage in some physical activities as a balance to the demands of college life; (2) to provide opportunities for students to develop a reasonable degree of skill in a variety of leisure-time activities, both for immediate and later use; (3) to offer opportunities for worthwhile social contacts in the activities of the service program, in intramural activities, and in intercollegiate athletics; and (4) to prepare prospective teachers in the field of health education, physical education, and athletic coaching.

Achievement in all courses above the general education and service course level, including certification courses in the education and psychology sequences, must be at the "C" average level or above. It is stipulated further, that all students must have passed the physical fitness tests prior to enrollment in fundamentals and techniques courses.

In addition to the above items, all University regulations apply as they concern requirements, teacher education admission and retention and requirements of non-teacher preparation courses of study.

**A major in health and physical education** requires a minimum 203 quarter hours.

**A minor in physical education** requires 36 quarter hours.

**A minor with certification in health and physical education** requires completion of 36 quarter hours of which 18 quarter hours are in health education and eighteen quarter hours are in physical education as outlined.

**A major in health education** requires 36 quarter hours as outlined.

**A minor in health education with teacher certification** requires 33 quarter hours as outlined.

**A major in recreation** requires 202 quarter hours.

**A minor in recreation** requires 51 quarter hours.

### THE PHYSICAL EDUCATION SERVICE PROGRAM

All freshman and sophomore students are required to take two hours of physical education activity each week until six quarters of work have been completed. A student whose physical condition does not permit him to pursue the regular activity courses must take courses in "Individually adapted physical education." These students must secure a permit from competent medical authorities following a physical examination, which must be verified by the campus physician and communicated to the Heads of the department.





#### Required Courses for All Freshman Students:

Credit Hours

P.E. 11	Body Conditioning and Group Games	1
P.E. 12	Elementary swimming	1
P.E. 14	Gymnastics (HPE Majors Only)	1

#### Required Courses for All Sophomore Students—Select any four:

Credit Hours

P.E. 21	Basketball	1
P.E. 22	Folk and Square Dancing	1
P.E. 23	Soccer and Speedball	1
P.E. 26	Tennis	1
P.E. 27	Tap Dancing	1
P.E. 28	Modern Dance	1
P.E. 29	Softball	1
P.E. 30	Touch Football	1
P.E. 31	Archery	1
P.E. 32	Badminton and Deck Tennis	1
P.E. 34	Track and Field	1
P.E. 35	Wrestling	1
P.E. 37	Small Craft	1
P.E. 38	Bowling	1
P.E. 39	Handball and Shuffleboard	1
P.E. 41	Golf	1
P.E. 42	Social Dancing	1
P.E. 91-96 (incl.)	Individually Adapted Physical Education	1

**Uniform Regulations.**—Students enrolled in physical education activity courses are required to provide themselves with the following apparel to be secured through the University Book Store:

#### Women

One regulation gymnasium suit	\$ 4.00
One pair of socks	.50
One pair of gymnasium shoes	3.50
One swimming suit	3.00
One bathing cap	1.00
<b>Total</b>	<b>\$12.00</b>

#### Men

One white "T" shirt	\$ 1.00
One pair of blue shorts	1.50
One pair of socks	.50
One pair of gymnasium shoes	4.00
One pair of swimming trunks	2.50
One athletic supporter	.75
<b>Total</b>	<b>\$10.25</b>

**These prices are subject to change. Uniform regulations for selected courses as bowling, dancing, golf and gymnastics are governed by the activity (for example: Leotards \$4.25, Bowling shoes \$4.95).**



**Lock-Locker Regulation.**—Each woman student is required to purchase a specified regulation lock which is hers for subsequent courses. The lock must be purchased at the University Bookstore. Men students are not required to purchase locks.

Course	Credit Hours
Health 151 Personal Hygiene .....	3
Health 211 Health Examination .....	3
Health 212 School Hygiene .....	3
Health 213 Health Instruction .....	3
Health 301 Community Hygiene and Sanitation .....	3
Health 302 First Aid .....	3
Health 304 Family Health .....	3
Nutrition 212 Nutrition for Teachers .....	3
HPER 401 Seminar in Health, Physical Educ. and Recreation .....	3
HPER 402 Organization and Administration of Health and Physical Education .....	3
HPER 403 Individual Physical Education for Handicapped Students ...	3
Total .....	33

#### **Courses Required for Certification in the Area of Health Instruction**

Course	Credit Hours
Health 151 Personal Hygiene .....	3
Health 211 Health Examination .....	3
Health 212 School Hygiene .....	3
Health 213 Health Instruction .....	3
Nutrition 212 Nutrition for Teachers .....	3
Health 301 Community Hygiene and Sanitation .....	3
Health 302 First Aid .....	3
Health 304 Family Health .....	3
Total .....	24



## UNDERGRADUATE CURRICULUM IN HEALTH INSTRUCTION

The purpose of this curriculum in health instruction is to prepare students to teach health on the secondary level, grades seven through twelve.

Course requirements total 200 hours. All requirements above the General Education core must be passed with a "C" grade or better. All students must have passed the department physical fitness test prior to being enrolled in fundamental and techniques courses.

Health and Physical Education majors are required to complete fundamentals and techniques courses as outlined below. Courses as listed in the four groups must be completed prior to the student teaching experience.

### GROUP I INDIVIDUAL AND DUAL SPORTS

- 103 Stunts and Tumbling
- 202 Intermediate Swimming
- 231 Archery
- 233 Tennis
- 234 Track and Field
- 235 Badminton

### GROUP II TEAM SPORTS

- 101 Football (Men)
- 201 Soccer (Women)
- 203 Volleyball and Deck Tennis
- 212 Basketball
- 213 Softball

### GROUP III RHYTHMS

- 211 Modern Dance
- 221 Folk Rhythms
- 240 Social Dance

### GROUP IV COACHING AND OFFICIATING

- 421 Football (Men)
- 422 Basketball
- 423 Track and Field
- 434 Festivals and D. (Women)



**Courses Required for Physical Education as a Minor: Thirty-six (36) quarter hours.**

Course	Credit Hours
Physical Education 103 Conditioning, Apparatus, Stunts and Tumbling	2
Physical Education 202 Intermediate Swimming	1
Physical Education 221 Folk Rhythms	2
Physical Education 243 Play and Games for Elementary Schools	3
Physical Education 333 Principles and Philosophy	3
Physical Education 421 Athletic Coaching and Officiating—Football	2
or 422 Athletic Coaching and Officiating—Basketball	2
Physical Education 371 Methods in Physical Education	3
Health Education 302 First Aid	3
Health and Physical Educ. 402 Organization and Administration of Health and Physical Education	3
Health and Physical Educ. 403 Individual Physical Education for Handicapped Students	3
Electives from Rhythmic Activities	2
Physical Education 211 Fundamentals and Techniques—Modern Dance	
Physical Education 222 Tap Rhythms	
Physical Education 223 Modern Dance Composition	
Physical Education 240 Social Dancing	
Electives from Team Sports	4
Physical Education 101M Fundamentals and Techniques—Football or 101W Fundamentals and Techniques—Field Hockey	
Physical Education 201 Fundamentals and Techniques—Soccer and Speedball	
Physical Education 203 Fundamentals and Techniques—Volleyball and Deck Tennis	
Physical Education 212 Fundamentals and Techniques—Basketball	
Physical Education 213 Fundamentals and Techniques—Softball	
Electives from Individual and Dual Sports	5
Physical Education 231 Fundamentals and Techniques—Archery	
Physical Education 233 Fundamentals and Techniques—Tennis	
Physical Education 234 Fundamentals and Techniques—Tack and Field	
Physical Education 235 Fundamentals and Techniques—Badminton	
Physical Education 236 Fundamentals and Techniques—Golf	
Physical Education 237 Fundamentals and Techniques—Handball and Shuffleboard	
Physical Education 239 Fundamentals and Techniques—Bowling	
Physical Education 242 Fundamentals and Techniques—Wrestling	
Total	36





**Courses Required for Certification in the area of health and physical education:**  
Eighteen (18) quarter hours in health education and eighteen (18) quarter hours in physical education.

Course		Credit Hours
Nutrition	212 Nutrition for Teachers .....	3
Health	212 School Hygiene .....	3
Health	213 Health Instruction .....	3
Health	301 Community Hygiene and Sanitation .....	3
Health	302 First Aid .....	3
Health	304 Family Health .....	3
		<hr/>
		18
Physical Education	103 Conditioning, Apparatus, Stunts and Tumbling .....	2
Physical Education	202 Intermediate Swimming .....	1
Physical Education	243 Play and Games for Elementary Schools .....	3
Health and Physical Educ.	403. Individual Physical Education for Handicapped Students .....	3
Rhythmic Activities — two courses		
Physical Education	221 Folk Rhythms or .....	
Physical Education	222 Tap Rhythms or 211 or 240 .....	2
Physical Education	223 Modern Dance Composition or .....	
Physical Education	240 Social Dancing or Team Sports .....	4
Physical Education	101M Fundamentals and Techniques— Football (Men)	
	101W Fundamentals and Techniques— Field Hockey (Women)	
Physical Education	201 Fundamentals and Techniques— Soccer and Speedball	
Physical Education	203 Fundamentals and Techniques— Volleyball and Deck Tennis	
Physical Education	212 Fundamentals and Techniques—Basketball	
Physical Education	213 Fundamental and Techniques—Softball	
	Individual and Dual Sports .....	2
Physical Education	231 Fundamentals and Techniques—Archery	
Physical Education	233 Fundamentals and Techniques—Tennis	
Physical Education	234 Fundamentals and Techniques— Track and Field	
Physical Education	235 Fundamentals and Techniques—Badminton	
		<hr/>
		1
<b>Electives</b>		
Physical Education	236 Fundamentals and Techniques—Golf	
Physical Education	237 Fundamentals and Techniques— Handball and Shuffleboard	
Physical Education	239 Fundamentals and Techniques—Bowling .....	18
		<hr/>
Total .....		36

## The Recreation Curriculum

The curriculum in recreation has as its purpose to give the student theory and practice in the broad field of recreation and to prepare him to meet requirements for recreational employment. This major is designed to develop leaders in recreation with a sound general education and an insight into the social responsibilities of community agencies.

The curriculum is not designed to certify recreation education teachers or coordinators of public school recreation programs employed by school districts. The curriculum is designed to prepare students for a variety of positions as recreation leaders or directors in public and private agencies, including administrative positions in parks, recreation departments, positions as supervisors or community center directors as well as industrial, hospital, church, institution, settlement house and armed services recreation program workers.

The curriculum includes courses in education, psychology, natural and social sciences and courses in sports, aquatics, crafts, drama, music, social recreation, dance and camping. Practical experience is obtained through community as well as camp work experience.

All students in the recreation curriculum must meet the general education requirements of the University. To meet these requirements, students are required to complete approved sequences of courses in the areas of the humanities, mathematics, the natural sciences, and the social sciences. Curriculum requirements total 202 hours.

## THE CURRICULUM IN HEALTH INSTRUCTION

Freshman Year				Sophomore Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Art 133			3	Chemistry 111, 12, 13	4	4	4
Biology 101, 02, 03	4	4	4	Education 201	3		
English 101, 02, 03	3	3	3	English 211, 12, 13	3	3	3
Health 151		3		Health 211, 12, 13	3	3	3
HPER 101	3			Nutrition 212	3		
History 201, 02, 03	3	3	3	PE 20-42	1	1	1
Math 111, 12	4	3		Psychology 242, 43		3	3
PE 11, 12, 13	1-1	1		Zoology 202, 203		5	5
Music 131			3				
	15	18	19		17	19	19

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Education 301, 387, 462	3	3	3	Education 471-2			15
Education 473			3	HPER 401, 02, 03	3	3-3	
Health 301, 302, 304	3	3	3	HPER 450	3		
Health 371H			3	Psychology 463	3		
HPER 404	3			Sociology 452, 453	3	3	
Microbiology 241, 412	5	4		Electives	3	6	
PE 311, 312		3	3				
Physics 111		3			15	15	15
Psychology 312	3						
Sociology 221		3					
	17	19	15				

The degree requirements of Health Instruction encompass 203 quarter hours.

# CURRICULUM FOR BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN HEALTH AND PHYSICAL EDUCATION

Freshman Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 101, 02, 03	3	3	3
History 201, 202, 203	3	3	3
Biology 101, 02, 03	4	4	4
Health 151	3		
Art 133		3	
Music 131			3
Mathematics 111, 112		4	3
HPE 101	3		
PE 11, 12, 13	1	1	1
	<u>17</u>	<u>18</u>	<u>17</u>

Sophomore Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 211, 12, 13	3	3	3
Sociology 221	3		
Zoology 202, 203		5	5
Health 211, 12, 13	3	3	3
Education 201	3		
Psychology 242, 243		3	3
PE 103		2	
PE 14, 202, 243	1	1	3
PE 14-50's	1	1	1
PE 101M or 201W	1		
	<u>15</u>	<u>18</u>	<u>18</u>

Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Education 301, 472, 387	3	0	3
Health 301, 302, 304	3	3	3
Psychology 312	3		
PE 311, 312, 333	3	3	3
PE 421M, 431, 422	2	3	2
HPE 371E, 371S	3	3	
PE 231, 212, 233	1	1	1
PE 234, 221, 211	1	2	1
PE 235, 240, 213		1-1	1
Nutrition 212			3
	<u>19</u>	<u>17</u>	<u>17</u>

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Education 472s, 462	15	3	
Psychology 463			3
HPE 401, 02, 03		3	6
HPE 450, 404		3	3
PE 423, 434		2	3
Electives		3	2
	<u>15</u>	<u>14</u>	<u>17</u>

# CURRICULUM FOR BACHELOR OF SCIENCE DEGREE WITH MAJOR IN RECREATION

Freshman Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 101-2-3	3	3	3
History 201-2-3	3	3	3
Art 133		3	
Hlth. Educ. 151	3		
HPER 101	3		
Math 111, 112		4	3
Music 301			3
Nat. Sci. 121-22-23	4	4	4
PE 11, 12, 13	1	1	1
	<u>17</u>	<u>18</u>	<u>17</u>

Sophomore Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
English 211-12-13	3	3	3
Animal Husb. 211		3	3
Art 241			
Ind. Arts 151	3		
PE 14, Req., Req.	1	1	1
PE 221, 103, 211	2	2	1
PE 202, 231		1	1
PE 311, 312		3	3
PE 243			3
Psy. 221, 222, 242	3	3	3
Soc. 221		3	
Electives	5		
	<u>17</u>	<u>19</u>	<u>18</u>

Junior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
Art 301			3
Drama 301, 332		3	3
Hlth. 301, 302, 304	3-3		3
HPER 401	3		
PE 222, 212, 213	2	1	1
PE 235, 232, 239, 37	1	1-1	1
PE 236, 237	1	1	
PE 240, 233	1		1
Phil. 323		3	
Rec. 253, 353	3		3
Soc. Wel. 360		3	
Electives		4	3
	<u>17</u>	<u>17</u>	<u>18</u>

Senior Year	Quarter		
	Hours Credit		
Name of Course	I	II	III
ACI 473		3	
HPER 403, 404, 450		3-3	3
PE 483, 481		3	3
PE 434, 413			3-3
Rec. 301, 412, 414	3	3	3
Rec. 473	6		
Soc. 451, 461		3	3
	<u>9</u>	<u>18</u>	<u>18</u>

NOTE: It is strongly suggested that Recreation Majors utilize nine of the twelve elective hours by selecting the Sociology 211, 212 and 213 sequence of courses.

## Minor Recreation

The individual should have had the following core of courses in sociology, philosophy, psychology, and drama.

Sociology 211, 212, 213, (or equivalent), and Sociology 221

Philosophy 323

Psychology 221, 222, 242, (or equivalent), and 243

Drama 301, 332

The following courses are required for the minor in recreation, in addition to the above core:

Health 301, 304 or Soc 322

HPE 401, 403

PE 311, 312, 434, 481

Rec 253, 301, 353, 412, and 6 hrs of Rec 473, unless majoring in a teacher education field in which student teaching is a requirement.

Sociology 451, 461, Social Welfare 360

51 quarter hours required for minor in recreation.

## PRE-PHYSICAL THERAPY CURRICULUM (OPTION)

The course of study provides the necessary college preparatory work leading to entrance into the professional preparation institutions. In addition an individual will have gained a teaching certificate in the area of Health Instruction. The board supportive background is similar to that which is required for other degrees within the department, with such additions as provide the strength in subject matter important to the physical therapy schools. One may also, if one wishes, matriculate under the Health and Physical Education course of study and elect the chemistry, physics, and language to satisfy the physical therapy requirements. In some ways this would be better, in that the student would become proficient in a wide range of physical skills and thus be better prepared to assist patients in their efforts to regain their physical efficiency.

First Year:

Either Health and Physical Education or Health Instruction listings.

Second Year:

Either Health and Physical Education or Health Instruction listings, electing chemistry if HPE.

Third Year:

Either Health and Physical Education or Health Instruction listings, plus electing additional chemistry and physics if Health and Physical Education.

Fourth Year:

Either Health and Physical Education or Health Instruction listing, plus electing the foreign language as well as such other items as have not been taken up to this point.

## COURSES ELECTED IN PREPARATION FOR PHYSICAL THERAPY

Math 113 (3)

Physics 211, 212, 213 (4-4-4)

Chemistry 111, 112, 113 (4-4-4)

Chemistry 211, 212, 213 (4-4-4)

French, German or Spanish 101, 102, 103 (3-3-3)

## Department of Psychology

M. I. CLAIBORNE, Ph.D. Head

The courses in the Department of Psychology are designed to satisfy the needs of two groups of students: First, students who desire to major in psychology as preparation for a career in psychology or who desires intensive training in psychology as background for social work, personnel work, medicine, or psychiatry; and second, students who desire training in psychology as a part of general education, and as a means of understanding human behavior.

## Requirements for a Major in Psychology

Requirements for a major in psychology are Psychology 221-22-23 (the basic courses in general psychology) and thirty-nine additional hours in psychology courses on the 300 and 400 levels.



Supporting courses in other departments required for a major in psychology are: Biology 111-12-13, Mathematics 111-12-13, Sociology 211-12-13, two years French or German, Art Appreciation and Music Appreciation, American History 201-02 and Political Science 221.

Recommended electives: Genetics, Human Physiology, Physics, Philosophy, Anthropology, History of Civilization, Economics and advanced courses in the areas of Sociology and Economics.

Graduation requirements for Bachelor of Arts degree in Psychology: complete Liberal Arts Core, and three years (3rd year level) French or German, and earn a minimum of 198 hours credit, 72 of which must be in 300 and 400 level courses including the 39 hours of advanced psychology required for major.

Bachelor of Science Degree: Same as for Bachelor of Arts Degree, except that only two years (2nd. year level) French or German are required.

Advanced psychology majors shall have the opportunity to practice and acquire experience in using psychological techniques in the psychological services laboratory, and shall be required to complete a project (minor research) under staff supervision and present and defend the same in the senior project seminar. The University Testing Service and the University Counseling Center are open to advanced undergraduate and graduate psychology majors as additional sources of training and experience.

**NOTE: Teacher Education.** General psychology is not a teacher education area, and psychology majors do not qualify for teacher certification. Students interested in study in the area of psychology who desire to qualify for teacher certification are advised to minor in psychology and major in the subject area in which they desire teacher certification, or the student may major in psychology and in addition, complete certification requirements in the desired area of certification.

#### CURRICULUM FOR BACHELOR OF ARTS DEGREE WITH A MAJOR IN PSYCHOLOGY

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-02-03	3	3	3	Psychology 221-22-23	3	3	3
Mathematics 111, 112, 114	4	3	3	English 211-12-13	3	3	3
French or German	4	4	4	French or German	3	3	3
History 201-02	3	3		Sociology 211-12-13	3	3	3
Political Science 221			3	Biol. 111-12-13	5	5	5
Physical Education 11-13	1	1	1	Physical Education 20-50	1	1	1
Psy. Orientation	1	1	1				
Music & Art Appr.		3	3				
	16	18	18		18	18	18

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Psychology 321, 431, 351	5	5	5	Psychology 411-12-13	3	3	3
Psychology 311, 341	3	3		Psychology 452-461-450	3	3	3
Electives	9	9	12	Psychology 481-82		3	3
	17	17	17	Electives	12	6	6
					14	15	15

#### CURRICULUM IN CORRECTIONAL SERVICES

##### Admission:

The first step in admission to the Correctional Services and/or Law Enforcement is admission to undergraduate study in the University. Eligibility for admission to undergraduate study at the university is based on a high school diploma (or its equivalent) from an accredited high school. (See University Bulletin for details).

For admission, write the Director of Admissions for University Bulletin and application form, and file application as directed.

Any student admitted to undergraduate study at the university is eligible to choose Law Enforcement, or Correctional Services, as a major and to study toward the Bachelor degree in either area. Likewise, persons admitted to the university may take courses in either curriculum as a part-time student or on an inservice basis.

To be eligible for financial assistance provided for the program, the student commits himself to a career in Law Enforcement or Correctional Services.

## The Curriculum

The Correctional Services Curriculum focuses on preparation of personnel for agencies and institutions offering correctional services. The curriculum is designed to offer the student a general college level education, rich in the humanities; an understanding of human behavior: individual, social, and collective; and technical study of correctional services.

### Bachelor of Science Degree in Correctional Services—Four Year Curriculum

A. General Education		78
Course No.	Course	Hrs.
Eng. 101-02-03	Freshman English	9
Eng. 211-12-13	World Literature (or American Literature)	9
Math. 111-12-13	Introduction to College Math	9
Sci. 121-22-23	Introduction to Natural Science (any year of lab Science)	12
Hist. 121-22-23	Growth of Civilization (or American History)	9
Soc. 211-12-13	Introduction to Sociology	9
Speech 201	Fundamental of Speech	3
Speech 202	Public Speaking	3
Phil. 323	Introduction to Philosophy	3
Mus. 131	Music Appreciation	3
Art 133	Man and Materials	3
P. E.	Physical Education	6
B. Study of Behavior: Individual, Social and Collective		
Psychology		25
Course No.	Course	Hrs.
Psy. 221-22	General Psychology	6
Psy. 311	Elementary Statistics	3
Psy. 321	Abnormal Psychology	5
Psy. 341	Social Psychology	3
Psy. 351	Developmental Psychology	5
Psy. 461	Differential Psychology	3
Sociology and Social Welfare		27
Soc. 221	Anthropology	3
Soc. 322	The Family	3
Soc. 323	Problems in Courtship and Marriage	3
Soc. 332	Social Pathology	3
Soc. 393	Racial and Cultural Relations	3
Soc. 421	Population Problems	3
Soc. 460	Problems of the Poor in America	3
Soc. 461	Urban Sociology	3
Soc. 482	Collective Behavior	3
History and Political Science		25
Hist. 341-42	History of Tennessee	6
Hist. 491-92	The History of the Negro in America	6
Pol. Sci. 221-22-23	American Government	9
Pol. Sci. 373	Propaganda and Public Opinion	3
Correctional Services		45
CS 201	Introduction to Correctional Services	3
CS 301	Survey of Correctional Institutions and Practices	3
CS 311	Interviewing and Counseling Juvenile Delinquents	3
CS 341	Social Work as a Profession (Soc. Wel. 341)	3
CS 342	Social Welfare (Soc. Wel. 342)	3
CS 360	Group Leadership (Soc. Wel. 360)	3
CS 381	Correctional Services and Problems of Deprived Groups	3
CS 412	Criminology (Soc. 412)	3

CS 451	Juvenile Delinquency (Soc. 451)	3
CS 452	Control and Prevention of Juvenile Delinquency	3
CS 453	Probation and Parole of Juvenile Delinquents	3
CS 493	Social Control (Soc. 493)	3
CS 471	Sensitivity Training for Correctional Personnel	3
CS 481	Observation and Field Experience	3
CS 450	Senior Project Seminar	3

### Associate Arts Curriculum in Correctional Services—Two Year Curriculum

General Education		66
Eng. 101-02-03	Freshman English	9
Math. 111-12-13	Introduction to College Mathematics	9
Sci. 121-22-23	Introduction to Natural Science (any year of lab Science)	12
Hist. 121-22-23	Growth of Civilization (or American History)	9
Soc. 211-12-13	Introduction to Sociology	9
Psy. 221-22	General Psychology	6
Psy. 323	Mental Hygiene	3
Pol. Sci. 221-23-23	American Government	9
Correctional Services		39

CS 201	Introduction to Correctional Services	3
CS 301	Survey of Correctional Institutions and Practices	3
CS 311	Interviewing and Counseling Juvenile Delinquents	3
CS 341	Social Work as a Profession (Soc. Wel. 341)	3
CS 342	Social Welfare (Soc. Wel. 350)	3
CS 360	Social Welfare (Soc. Wel. 342)	3
CS 381	Correctional Services and Problems of Deprived Groups	3
CS 412	Criminology (Soc. 412)	3
CS 451	Juvenile Delinquency (Soc. 451)	3
CS 452	Control and Prevention of Juvenile Delinquency	3
CS 453	Probation and Parole of Juvenile Delinquents	3
CS 493	Social Control (Soc. 493)	3
CS 481	Observation and Field Experience	3

### COURSE OF STUDY FOR CORRECTIONAL SERVICES

Freshman Year				Sophomore Year			
Name of Course		Quarter Hours Credit		Name of Course		Quarter Hours Credit	
		I	II			I	II
Eng. 101-02-03		3	3	*Eng. 211-12-13		3	3
Math. 111-12-13		4	3	Psy. 221-22, 311		3	3
*Sci. 121-22-23		4	4	Soc. 211-12-13		3	3
**Hist. 121-22-23		3	3	Speech 201-02		3	3
Music 131			3	Psy. 341			3
Art 133			3	Hist. 341-42		3	3
P.E.		1	1	Pol. Sci. 221-22-23		3	3
		15	17	C.E. 201			3
				P.E.		1	1
						19	19

\*or any lab science

\*\*or Am. Hist.

\*or Am. Lit.

Junior Year				Senior Year			
Name of Course		Quarter Hours Credit		Name of Course		Quarter Hours Credit	
		I	II			I	II
Psy. 321, 461, 351		5	3	C.S. 311, 360		3	3
Phil. 323			3	C.S. 341, 342		3	3
Soc. 221, 332, 322		3	3	C.S. 412, 451		3	3
Soc. 393, 421, 460		3	3	C.S. 381, 452		3	3
Soc. 461, 482		3	3	C.S. 453, 493		3	3
Hist. 491, 492		3	3	C.S. 471			3
Pol. Sci. 373			3	C.S. 481			3
C.S. 301			3	C.S. 450			3
		17	18			15	15
							9

## DESCRIPTION OF COURSES

### School of Education

#### Department of Administration, Curriculum and Instruction

#### Description of Courses in Education

**101. Orientation.** (1) A course required of all freshmen registered in Elementary Education; designed to orient the student into the entire field of Elementary Education and to the life of the University.

**201. Foundations of Education.** (3) A study of the historical, philosophical, and sociological foundations of the American public schools, with emphasis on the traditional function of the American public school as a local community institution.

**301. School Organization, Administration, and Management.** (3) Planned to acquaint the student with the general organization, administration, and management of public schools; the composition and responsibilities of the state, local and district school boards; the principals, supervisors, and teachers are examined critically.

**Ed. 310. Penmanship.** (3) Develops skill in simple letter forms; upper and lower case letters to facilitate the teaching of reading in the first elementary grades, for chart making, and chalkboard work.

**321. Teaching Arithmetic in the Elementary School.** (3) An analysis of current methods in teaching arithmetic through first-hand experiences, the place of number meaning, thinking and drill in effective learning. Prerequisites: Math. 103, Psych. 242-243. Must be taken in Fall, Winter or Spring Quarter.

**322. Teaching of Language Arts in the Elementary School.** (3) A consideration of modern trends in teaching the language arts; using as tools of communication reading, spelling, literature, composition, and writing. The course also deals with the adequate training in both the subject matter and methods of teaching the language arts subjects. Prerequisites: Psych. 242-243. Must be taken in Fall, Winter or Spring Quarter.

**323. Teaching The Social Studies in the Elementary School.** (3) Includes a study of the objectives, scope, organization, and techniques of teaching on the elementary school level. Prerequisites: Hist. 121-2-3, 201-2-3, Geog. 171-2-3, Psych. 242, 243. Must be taken in Fall, Winter or Spring Quarter.

**324. Teaching Reading in the Elementary School.** Includes methods, materials and modern practices and trends in the teaching of reading at the elementary school level. Prerequisites: 242, 243. Must be taken in Fall, Winter or Spring Quarter.

**371. Special Materials and Methods in the Certified Area.** (3) Each University department preparing the prospective secondary school teacher offers a course designed to familiarize students with teaching techniques and information of special interest to the particular subject-matter area. Generally, it is best to schedule this course during the quarter preceding Education 472. An example of departmental offering is History 371, Teaching History in Secondary Schools, etc. Students should consult their departmental offerings for the appropriate course to be scheduled.

**381. Methods and Materials for Kindergarten—Grade Three.** (3) The course seeks to provide experience and understanding for the student who is interested in becoming a kindergarten and/or primary teacher. It emphasizes the physical, mental, social, and emotional characteristics of the five to ten year old and materials and methods appropriate for children on his developmental level.

**387. Curriculum Development.** (3) A critical study of the reorganization, construction, and administration of the school curriculum in the light of modern educational principles and objectives. Prerequisites: Education, 201, Psychology 242-243.

**450. Senior Project Writing.** (3) Designed to give opportunity for students to work individually on any problem of their choice in the area of elementary education. If a student has completed 60 hours of 300 and 400 level courses this may be taken without credit. (Must be taken on the Senior level.)

**462. School and Community Relations.** (3) Designed to alert the student to the relationship of school and community in building citizens (1) by developing in the student increased awareness of the local community and its role on the national and international scene, (2) by creating in the student greater sensitivity and insight into social processes and problems, (3) by reviewing the rights, privileges, responsibilities and duties of mature citizens, and (4) by exploring techniques aimed at effective use of community and community resources to provide life experiences for developing citizens.



**463. Audio-Visual Aids in Education.** (3) A survey course designed to acquaint the student with audio-visual materials of instruction. Proper classroom utilization of film strips, 16mm motion pictures, slides, graphic materials, field trips, exhibits and models are studied.

**465. Introduction of Special Education.** (3) Designed to acquaint the student with the general field of special education — its purpose and scope. The course is a prerequisite to all courses either graduate or undergraduate. Offered each quarter.

**467. Characteristics and Needs of the Mentally Retarded.** (3) A critical study of the classifications, etiology and specific characteristics of the various types of children with low intelligence. Prerequisite: Ed. 465.

**469. Vocational Guidance and Placement of the Mentally Retarded.** (3) Designed to acquaint the student with the duties and responsibilities of a rehabilitation counselor of a client who has a disability of mental retardation. Prerequisite: Ed. 465.

**471. Methods and Materials for Teaching the Mentally Retarded Child.** (3) Designed to acquaint the students with the principles underlying the methods and materials for teaching the children with low intelligence. Prerequisite: Ed. 465.

**472e. Student Teaching in the Elementary School.** (15 quarter hours credit). Fall, Winter, Spring Quarter. This course consists of directed observations, participation, and teaching in the elementary grades. It provides opportunities for students to work in typical school situations under the guidance of experienced teachers. Parallel readings and conferences for further interpreting and enriching these experiences are held regularly. This course is open only to seniors and teachers with some experience. Prerequisites: Education 201, 301, 321-2-3, 333, 387, Psychology 242, 243, 312; Art 310; Music 301; P. 243.

**472s. Student Teaching in the Secondary Schools, Grades 7 through 12.** (12 quarter hours credit). Actual classroom experience in secondary schools under the charge of expert teachers in cooperating schools. Student teacher schedules should be arranged well in advance of the senior year and planned so as to enable the student to devote full time to student teaching during the quarter in which the course is to be completed. Required for all students who are following the professional education core that leads to teaching as a career. Prerequisites: Ed. 201, Psy. 242-243, Ed. 301, Psy. 312, Ed. 387, and 371, the Department's specific methods course.

**473. Observation, Participation and Teaching the Mentally Retarded.** (3) A practicum in actual classroom situations, guiding the learning experiences of the mentally retarded child. Frequent conferences and reference readings will aid in the interpretation and solution of existing problems, as well as improving teacher-learning situations. Students must have completed the sequence of courses listed in the specialized area. Prerequisites: Ed. 465, 467, 471 and Student Teaching 472.

**490. Education for the Disadvantaged.** (3) This course is designed to develop an understanding of the circumstances of life for the disadvantaged, acquaint students with the characteristics and special needs of the disadvantaged, and develop understanding of materials and procedures for effective motivation and teaching the disadvantaged—3 quarter hours credit. Offered in the Winter and Spring Quarters.

**Education 491 Reading and Study in Secondary School.** (3) Emphasis placed upon teaching vocabulary, comprehension, and study skills in the content fields. Demonstration of tests, devices, and reading guides. Three credits.

**Educ. 492. Introduction to Adult Education.** (3) This is a survey course to provide the student an overview of the adult education movement in the United States. The aspects to be analyzed include the general philosophy, the objectives, program areas, the nature and characteristics of the disadvantaged adult, the nature of the teaching-learning transaction and the supporting institutions and organizations. Undergraduate and graduate credit (may be taken by a senior student admitted to teacher education).

## **COURSES IN SPECIAL EDUCATION**

**465. Introduction of Special Education.** (3) Designed to acquaint the student with the general field of special education—its purpose and scope. The course is a prerequisite to all courses either graduate or undergraduate. Offered each quarter.

**467. Characteristics and Needs of the Mentally Retarded.** (3) A critical study of the classifications, etiology and specific characteristics of the various types of children with low intelligence. Prerequisite: Ed. 465.

**469. Vocational Guidance and Placement of the Mentally Retarded.** (3) Designed to acquaint the student with the duties and responsibilities of a rehabilitation counselor of a client who has a disability of mental retardation. Prerequisite: Ed. 465.

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## **COURSES IN LIBRARY SERVICE**

### **Undergraduate**

**311. Use of Library Resources.** (3) A general course on the use of library facilities including the card catalog, periodical indexes, bibliographies, encyclopedias and other reference tools. Designed primarily to aid students in developing a systematic approach to using library materials. Students from any department may elect this course which is not included in courses required for certification. Three lectures.

**341. Introduction to Librarianship.** (3) Planned for the orientation of students in the broad field of library service. Includes an introduction to the development and function of libraries, types of services, types of library work and opportunities in librarianship. Field trips will be made in the city to libraries, bookstores, publishing houses and book binderies. Three lectures.

**361. Reference Materials.** (3) Embraces a study of basic reference books and other reference materials particularly for the school library or small library. Also includes the organization and administration of reference services. Three lectures.

**362. Book and Related Materials for Young People.** (3) Principles of selection, aids for selection, evaluation and use of books and related materials for young people. Emphasizes reading of books and an examination of materials for curricular needs, reading interests and personal growth of adolescent students. Attention also given to development of promotional activities aimed at stimulating use of materials by students and teachers. Three lectures.

**363. Books and Related Materials for Children.** (3) Principles of selection, aids for selection, evaluation and use of books and related materials for children. Emphasis placed on required readings for acquainting students with children's books and writers in the field. Attention given to an examination of materials for curricular need, reading interests, and personal growth, and to the development of promotional activities aimed at stimulating use of materials by students and teachers. Three lectures.

**441. Classification and Cataloging.** (3) Introduction to principles underlying the classification and simplified techniques of cataloging books. The abridged Dewey Decimal Classification scheme used and printed cards stressed. Making of unit cards, filing, and other essential procedures of organizing the book collection are included. Three lectures and one laboratory period.

**451. Organizing Library Materials.** (3) The organization of non-book materials including periodicals, vertical file and audio-visual materials such as filmstrips, films and recordings. Attention also given to weeding, inventory and care of books, and other procedures involved in developing a systematic program of acquisition, upkeep and use of library materials. Three lectures.

**452. School Library Administration.** (3) Principles, objectives and procedures involved in administering the small library. Standards and evaluation, housing and equipment, personnel, financial support, budgeting, loan systems, reports and other administrative procedures included. Three lectures and one laboratory period.

**463. Books and Related Materials for Adults.** (3) Special attention given to reading interests of adults, principle of election, evaluation, and use of books and related materials for adults. Development of reading lists based on adult interest and activities such as book reviews, forums and book discussions included. Three lectures.

**483. Non-book Materials.** (3) Emphasis on selection, aids for selection, evaluation and use of non-book materials in the library program in relation to the entire school program. Problems involved in developing the library as a materials center that is responsible for films, filmstrips, recordings and other non-book materials is included. Three lectures. Ed. 473 may be substituted for this course.

## ART

- 101. Introduction to Art.** (3) An introduction to the fundamental principles of the visual arts with stress on appreciation and the significance of art in contemporary life.
- 121-22. Fundamentals of Drawing.** (6) A study of perspective, the use of various materials, and the function of the visual elements in composition. Must be taken in sequence.
- 123. Figure Drawing.** (3) A course in which basic problems dealing with drawing the human figure are explored. Prerequisite: Art 122.
- 131. Basic Design.** (3) A contemporary approach to basic visual elements in design as they are related to two and three dimensional problems, with emphasis on creative projects.
- 132. Advanced Design.** (3) (Form organization) A continuation of Design 131, with emphasis on individual creative expression in design theory and innovation in the use of materials and techniques appropriate to the development of three dimensional structures. (New Course) 1.
- 133. Art Appreciation.** (3) A course for all students interested in understanding the visual arts in everyday experiences. An introductory survey of the visual arts dealing with fundamentals and historical fragmentations of Eastern and Western civilizations.
- 201. Afro-American Art.** (3) A survey of Afro-American Artists with reference to experimental form in sculpture and ceramics.
- 202. Afro-American Painters and Print Makers.** (3) A general survey of Black Artists from 1600 to 1910.
- 204. Beginners Lettering.** (3) An introduction to basic knowledge of hand lettering techniques with emphasis in two phases: The basic fundamentals of letter forms, and the production of single stroke bulletin type lettering.
- 221. Basic Painting.** (3) Emphasis in transparent and opaque watercolor.
- 222. Basic Painting—Synthetic Media.** (3) A study of techniques using various types of synthetic painting media. Prerequisite: Art 221 or consent of instructor.
- 223. Basic Painting—Oil Medium.** (3) Painting in oils with emphasis on sensitivity to creative expression and the development of techniques resulting for the intrinsic nature of the medium. Prerequisite: Art 222 or consent of instructor.
- 241. Crafts.** (3) A crafts course giving art experiences useful in community activities: such as, recreation center, camps scout programs, and for individuals seeking a hobby in plastic arts.
- 301. Basic Ceramics.** (3) An introductory course in pottery making including designing, hand forming, decorating and firing ceramic objects.
- 302. Advanced Ceramics.** (3) Learning to throw on the potters wheel, firing and glazing techniques, and mosaics.
- 321. Painting in Oils.** (3) A continuation of basic painting in oils. Prerequisite: Art 223.
- 322-23. Painting.** (6) Advanced development in various techniques with emphasis on individual selection of content. Prerequisite: Art 222, 223, 321.
- 331. Art History.** (3) An introductory survey of the development of the visual arts from the Pre-historic to the Medieval era.
- 332. Art History.** (3) An introductory survey of the development of the visual arts from the Medieval era through the late Renaissance.
- 333. Art History.** (3) An introductory survey of the visual arts from the Late Renaissance to Cubism 1900's. Prerequisite: 331, 332.
- 341. Basic Sculpture.** (3) Experimentation with materials and techniques of direct carving in wood, stone and welding various metals.
- 350. Basic Graphics.** (3) A course to familiarize students with various print making processes, techniques in wood cut, etching, lithography, serigraphy, relief printing, intaglio and linoleum block printing. Prerequisite Art 131 or permission of the instructor.
- 351. Advanced Graphics.** (3) A continuation of 350, with emphasis on professional developments in intaglio media. Work completed in this course should qualify as a part of the senior exhibition in senior year. Prerequisites: 131, 132, 350.
- 371a. Art Education (Methods).** (3) Experience in understanding the methods, materials and problems unique in teaching grade 1-12. Prerequisite: Junior standing in the department of Art.



**371b. Art Education (Methods).** (3) Development of the child in the art program. Experience in methods, materials and media. Prerequisite: Art 371a. Must be taken in sequence.

**434. Contemporary Art.** (3) A course dealing with special topics on the development of the visual arts from the Cubist era to the present day. Prerequisite: 331, 332, 333.

**400. A General Historical Survey of Afro-American Art and Artists.** (3) A survey of Negro Artists from 1800 to the present.

**450. Senior Project.** (3) Is designed to give seniors in the department the opportunity of selecting and developing written research related to art. This project is to be written under the supervision of the student advisor and must be approved by the advisor and department head. Three copies of the project must be turned in before a grade is awarded. One copy is returned to the student and two copies filed in the Department.

## **BUSINESS ADMINISTRATION**

### **Business Administration**

**101. Business Principles.** (3) A survey of the fundamental principles of business organization, finance, banking, credit management, salesmanship, and advertising. Required for all business majors. (Formerly Bus. Orient. 101).

**102. Business Finance.** (3) A survey of the general field of finance, including discussions of promotion; various types of business organizations; capitalization; methods of obtaining capital; business failures and re-organization.

**301. Data Processing.** (3) A study of the basic principles and applications of punched-card and record-keeping by tape in business. Card, tape, and business report designs; basic card and tape equipment, and their functions. Prerequisite: Sophomore status and above. (Formerly B.A. 201).

**302. Basic Computer Programming.** (3) This course deals with such matters as the 1401/1620 data processing system components; instruction and data flow; symbolic programming system; 1401/1620 instruction set: (a) input/output operations, (b) data transfer operations, (c) logic operations, (d) arithmetics. Prerequisite: B.A. 301.

**303. Autocoder Programming.** (3) This course deals with coding; assembly; process control statements; declarative statements; testing and debugging procedures, including patching and core dumps; comprehensive case practice problems and similar and related topics. Prerequisite: B.A. 301-2.

**323-24-25. Business Law.** (9) Fundamental principles of law most frequently involved in business transactions, including contracts, sales, partnerships, master and servant, principal and agent, corporations, negotiable instruments, property, bailments, and common carriers with the view of enabling businessmen to avoid litigation. (Formerly B.A. 322-23-24).

**326-27. Marketing Principles.** (6) A general survey of the marketing structure as it exists and functions. Problems involving marketing procedures, policies, and techniques are considered. (Formerly B.A. 311-12).

**328. Principles of Retailing.** (3) A basic survey course for students interested in retailing. Special consideration given to store organization, operation, and current distribution problems.

**329. Salesmanship.** (3) A study of the basic principles underlying the sales process and their application to the problems of salesmen. Prerequisite: Psychology 221-22 or registered therein. (Formerly B.A. 313).

**331-32. Business Organization and Management.** (6) A study of the various types of business organizations and management with special emphasis on their financing by means of stock, bonds, and other instruments of finance. The work of promotion, underwriting securities, internal financial management, reorganization and receivership treated.

**335. Report Writing.** (3) The purpose of this course is to help students to develop a clear, concise, convincing, and correct writing style which is adopted to readers of a report; to help students collect, analyze, organize, interpret, and present information to solve business problems; to instill in students an awareness of correct grammar and punctuation in writing. Prerequisite: English 321.

**403. Law of Agency, Partnership, and Corporation.** (3) Examination of the various relationships of agency is pursued in terms of laws involving the formation, operation, and termination of partnerships and corporations.

**420-21. Money and Banking.** (6) The purpose of this course is to develop a sound understanding of the role of banks in our economy. Specific emphasis on central bank functions such as: the control of reserves, the supervising of bank operations, controlling the supply of money, and carrying out the fiscal functions of the government. Prerequisite: 12 hours of Economics or Permission of the Instructor.



**422. Corporation Finance.** (3) Corporate organization and control; corporate securities, the management of fixed capital, working capital and income; reserve, surplus, and undivided profits; investment banking and the securities market; failure and reorganization. Prerequisites: 331-32.

**423-24. Personnel Administration.** (6) An examination of the principles and methods of efficient labor management in the maintenance of harmonious relationships between management and employees. Personnel organization, personnel procedures, and employee relationships are considered.

**425. Principles of Real Estate.** (3) The course deals with real estate contracts, deeds, and mortgages, the value of leases and leaseholds, and the valuation of real estate. Questions of title and title insurance and the Tennessee law regarding real property are considered. (Formerly Business Administration 437).

**431-32. Advertising Principles.** (6) A study of the economics of advertising, the use of research in advertising, analysis of current advertising policy and methods of procedure in selecting appeals and media, writing copy, and constructing layouts. Prerequisites: Marketing 311-12. (Formerly B.A. 411-12).

**433-34. Principles of Insurance.** (9) Presents the personal and business uses and fundamental principles of insurance in general and the types and organization of the insurance business. Emphasis is placed on life, accident and health, automobile, fire, and other property lines. (Formerly B.A. 325-26-27).

**440. Principles of Investments.** (3) Consideration is given to the functions and economic basis of investment; basic elements of investment and personal investment programs; although emphasis is on investment in securities, other avenues of investment are considered.

**441. Principles of Management.** (3) A study of the fundamentals of the organization and management of business and industry; the task of the business manager; correlation of the productive functions; scientific management; basic features of business administration.

**450. Senior Seminar.** (3)

## **COURSE DESCRIPTIONS**

### **Accounting**

**A11-12-13. Elementary Accounting.** (12) A basic course in accounting theory and practice. A prerequisite to all other courses in accounting. Three lectures and two one-hour laboratory periods per week.

**Accounting 220. Machine Accounting.** (3) Methods and problems of machine accounting including the use of punched-card system and electronic methods of processing accounting data. Prerequisite: Accounting 213.

**311-12-13. Intermediate Accounting.** (9) Theory and practice relating to the various balance sheet accounts, working papers, and statements. Prerequisite: Accounting 213. Two one-hour laboratory periods.

**314-15-16. Cost Accounting.** (9) A study of the principles of manufacturing and distribution cost accounting. Material, labor, and overhead cost in job order and process cost accounting; determination analysis of costs of distribution; and related problems treated; cost systems analyzed. (Formerly Acctg. 341-421-422). Prerequisite: Acctg. 313.

**317. Administrative Aspects of Accounting.** (3) Designed to aid students who expect to become managers; provides information concerning the meaning of accounting figures, terms, and techniques of analysis of reports; provides applications of techniques in making managerial decisions and judging performance. (Formerly Acctg. 316).

**320. Governmental Accounting.** (3) Accounting theory and problems peculiar to governmental units including organization, budgetary, accounting, fiscal accounting, auditing, classification and use of funds, and financial statements and reports. Prerequisite: Accounting 213.

**400-401. Advanced Accounting Problems.** (6) Theory and problems in advanced topics, including partnership problems, insolvency, estates and trusts and consolidated statements. Prerequisite: Accounting 313.

**411-412. Federal Tax Accounting.** (6) Designed to provide a comprehensive explanation of the Federal tax structure and to provide training in the application of tax principles to specific problems.

**413-14. Auditing Procedures.** (6) Principles of auditing which include a critical examination of financial statements. The text materials are amplified by special problems. Prerequisite: Advanced status in Accounting. (Formerly Acctg. 423).

**415. Comptrollership.** (3) A study of the fiscal functions assigned the comptroller in a large

enterprise in connection with construction, control, and interpretation of accounts for internal use. (Formerly Accounting 462).

**418. Accounting Systems.** (3) A study of the problems involved in the design and installation of accounting systems, including systematizing the clerical department of business. Prerequisite: Advanced status in Accounting. (Formerly Acctg. 461).

### **Economics**

**211-2-3. Economic Principles.** (9) Principles and problems associated with the production, exchange, and the use of wealth.

This course is a prerequisite to all Junior and Senior level courses in Economics.

**204. Consumer Economics.** (3) Designed to acquaint the student with the character and significance of the factors which determine and govern consumption, particularly as they are related to the prosperity and stability of the economic system.

**315. Current Economic Problems.** (3) Examination of key economic issues. Such major objectives as economic progress, economic stability, economic freedom, and economic justice provides a general framework for analyzing existing and proposed economic programs and policies. Analysis of problems relating to concentration of economic power, economic growth, inflation, unemployment, public debt, income maintenance, agricultural and international economic affairs. Prerequisite: 9 hours in Economics or Permission of Instructor.

**301. Labor Problems.** (3) A study of labor problems from union and management point of view with emphasis on the social and economic aspects of labor relations. Prerequisite: 9 hours in Economics or Permission of Instructor.

**302. Intermediate Economics.** (3) An examination of the theory of price and distribution, as to the price market system and the means by which it allocates scarce resources among competing wants. Topics included are: Consumer behavior and analysis, Product pricing and output Resource pricing, and the welfare implications of alternative market organizations. Prerequisite: Economics 211-12-13.

**303. Labor Legislation and Public Policy.** (3) Criteria for public policy concerning unions and collective bargaining; current problems in labor legislation; role of federal and state government in industrial relations; decision making process in labor legislation. Prerequisite: 9 hours in Economics or Permission of Instructor.

**304. Government and Business.** (3) This course deals with the problems involved in developing and maintaining public policy that will preserve and stimulate competition in American industry. Attention will focus on administrative and legislative controls in such areas as general restraints of trade and monopoly, regulation of standards of fair competition licensing and regulation of entry into trade and professions, and regulation of public utilities and services. Prerequisite: Economics 211-12-13 or Permission of Instructor.

**404. Comparative Economic Systems.** (3) The study and appraisal of the operation of and theories underlying capitalism, fascism, socialism, communism, and other economic systems. Prerequisite: 12 hours of Economics or Permission of Instructor.

**405. International Economics:** (3) Deals with the history and methods of international economic relations and the effects of international trade upon the efficiency, growth, and stability of national economies. This course is concerned with the analysis of international policies involving commodity agreements, trade restrictions, exchange controls, exchange rates, commercial treaties, custom unions, European economic integration, foreign investments and related topics. Prerequisite: 12 hours in Economics or Permission of the Instructor.

**419. Business Economics.** (3) This course deals with the application of economic theory to business decision making, with emphasis on profit objectives, capital budgeting, economic forecasting, and economic measurement. Prerequisite: 18 hours of Economics or Permission of the Instructor.

**420-21. Money and Banking.** (6) The purpose of this course is to develop a sound understanding of the role of banks in our economy. Specific emphasis on central bank functions such as: the control of reserves, the supervising of bank operations, controlling the supply of money, and carrying out the fiscal functions of the government. Prerequisite: 12 hours of Economics or Permission of Instructor.

**Economics 211-12-13SW. Economic Principles.** An introduction to economic principles, problem, and policies with emphasis on economic welfare analysis, the economic and ethical conditions of optimum welfare arrangements, social welfare functions and planning, and the role of economic theory and moral principles in the formation of economic policy.

**Economics 406. Economics of Social Security.** This course involves a rigorous analysis of the socio-economic impact of unemployment, child and woman labor, hours of work and wages, old age, industrial accidents, sickness, and so forth on individuals and groups; and examines protective legislation in this area.

#### **Business Education and Office Administration**

**BE 101. Orientation to Business.** (0) An orientation course designed to acquaint freshmen and new students with the Department, curricular offerings, and requirements.

**BE 371A. Methods of Teaching Business Skills.** (3) Methods and materials in teaching typewriting and shorthand and office practice. (Prerequisites: BE 400, courses in typewriting, shorthand, and office procedures.) Seniors only. Also see requirements for student teaching.

**BE 371B. Methods of Teaching Social Business.** (3) Methods of classroom procedures in the teaching of general business subjects, business law, business organization, elementary economics, bookkeeping, and other general business subjects.

**BE 400. Principles and Philosophy of Vocational Business Education.** (3) A study of the historical background, philosophy and objectives, principles, problems, and trends in vocational business education.

**BE 450. Senior Seminar.** (2) Methods of educational research applied through critical evaluation of selected problems and review of current literature in the field of business education. A research project is required.

**BE 472. Student Teaching.** (15) Same as Education 472.

**BE 475. Stenograph Complete Teacher-Education Course.** (3) Touch shorthand training course. Analysis of teaching techniques, initial mastery of entire touch shorthand theory, and development of basic dictation speeds.

#### **Office Administration**

**OA 111-112-113. Beginning and Intermediate Typewriting.** (6) Development of basic typewriting skills. Students who have had typewriting should not register for the first course, they will be placed according to level of performance.

**OA 201. Office Machines.** (3) Skill building in the use of duplicating, calculating, transcribing, key punch machines, and other office machines.

**OA 203. Computing Machines. For Non-Majors Only.** (1) Basic instruction and training to develop skill in the operation of computing machines: including adding machines, calculators, and comptometers.

**OA 204-205-206. Beginning and Intermediate Shorthand.** (9) Development of skill in recording dictation—using the Gregg system or a machine system—and the acquirement of basic transcription skills.

**OA 221. Production Typewriting.** (4) Five meetings weekly. Sustained production of business papers and communications using simulated office materials; and the development of higher typewriting speeds.

**OA 304. Dictation and Transcription.** (3) Ability to take dictation rapidly and to transcribe available copy. Pre-requisite: OA 206 or equivalent skill.

**OA 305. Specialized Dictation and Transcription.** (3) Transcription of legal, medical, and technical materials.

**OA 315. Business Communications.** (3) Study of principles, practices, and mechanics of writing in modern business, and the ability to compose and edit business correspondence.

#### **TECHNICAL OFFICE OCCUPATIONS**

##### **DESCRIPTION OF COURSES**

**OA 11/12. Introduction to Business.** (3-3) The course is designed to acquaint student with the organization and functional nature of business. Particular emphasis is placed on the role of the office worker as a contributor to business success.

**OA 21/22/23. Record Keeping and Applied Arithmetic.** (3-3-3) General aspects of record keeping for business, including cashier's records, checks, and bank statements, petty cash, budget, purchase, payroll, and retail sales-clerk records, and record keeping for the small retail businesses; related arithmetic computations are included.

**OA 31/32/33. Clerical Training.** (3-3-3) Basic clerical procedures, including filing, business forms, office communications, visual reproduction, mail and messenger service, receiving caller, typing business paper, sales procedures, and handling cash and checks.



**OA 34/35/36. Office Procedures and Practice.** (3-3-12) The mastery of office duties in realistic office situations. During the last quarter, students engage in full-time employment under supervised conditions.

**OA 41. Records Management.** (3) A study of the basic methods of maintaining records, stressing the importance of accuracy in classifying, locating and utilizing business records.

**OA 51. Intensive Employment Review.** (3) A thorough review of the basic clerical and stenographic activities with which office workers are involved: the importance of employment tests, and procedures and psychology of taking tests.

**OA 61/62/63. Business Communications.** (3-3-3) Development of ability to write business correspondence, including a review of basic English principles.

**OA 71. Office Relations and Etiquette.** (2) Orientation to office decorum and the development of the ability to work with people.

**OA 72. Personal-Social Relations.** (2) An understanding of, and skill in inter-personal relationships, personality, morale, personal efficiency, and human behavior as they relate to work climate and productivity.

#### **Health and Physical Education**

**101. Health, Physical Education and Recreation Orientation.** (3) Introduces freshman to the requirements for effective college living in general and to the field of health, recreation and physical education in particular. Includes a review of objectives, scientific foundations, opportunities for service and the qualifications and preparation of professional personnel in these three areas.

**371E. Materials and Methods in Physical Education for Elementary Schools.** (3) Special attention is given to content of the program, methods, procedures, techniques and equipment used in physical education programs in elementary schools. Class organization, teaching techniques, program planning, low organizational activities, team sports, individual and couple activities, and dance activities are included in this course. Required of majors and minors in health and physical education. Prerequisites: PE 221, 222 243, four hours fundamental and techniques, and 371-S. Tuesday and Thursday mornings are reserved for observation of physical education program on the elementary level.

**371H. Methods in Health Education.** (3) Concerned with the theoretical concepts of methodology and unit planning as well as with the practical presentation of health content, oral presentation, demonstrations and experiments, field trips, and programmed instruction. The total aspects of secondary health education are included in this course. Prerequisite: Health 151, 211, 212, and 213.

**371S. Materials and Methods in Health and Physical Education.** (3) Special attention to content of the program, methods, procedures, techniques, and devices relative to individual and dual sports, team games, rhythms, self-testing activities, and related events for boys and girls on the secondary school level. Required of majors and minors in physical education. Prerequisites: P.E. 221, 222, and 243 and at least three (3) other fundamentals and techniques courses. Students enrolled in 371 must reserve Tuesday and Thursday mornings for observation of teaching on secondary level.

**401. Seminar in Health, Physical Education and Recreation.** (3) Designed to acquaint the prospective teacher with changing trends in health education, physical education and recreation as related to present educational practices. Conducted on a problem-project basis. Required of all majors in health, physical education, and recreation and minors in health education, physical education and recreation courses.

**402. Organization and Administration of Health and Physical Education.** (3) Considers the philosophies policies, procedures, and financing of school health services and of the physical education program. Effective approaches are discussed for planning a program and initiating it in relation to the entire curriculum of the school and to community needs. Includes utilization and care of facilities and equipment, scheduling of classes, teaching loads, classification of pupils, selection of content, record keeping, and evaluation. Required of all majors in health and physical education and minors in health education or physical education. Prerequisite: Twenty-one quarter hours in health education, physical education and recreation courses.

**403. Individual Physical Education for Handicapped Students.** (3) A study of the types of handicapping conditions requiring modified physical education activity with instruction in specific activities for each type. Class work is organized on a laboratory basis to provide practical experience in conducting the program. Required of majors in health and physical education and minors in health education and physical education. Prerequisite: Health Education 302, P.E. 311, 312 and twenty-one quarter hours in health, physical education and recreation courses.



**404. Care and Prevention of Athletic Injuries.** (3) A course designed primarily for prospective coaches in the junior and senior high schools for preventing and administering treatment to athletic injuries. Discussion of the training program, including conditioning, athlete's diet, training room supplies, and the use of therapeutic equipment are included. Discussion, demonstration, and practical laboratory experiences related to various techniques used in taping and bandaging are provided. Required for male majors in HPER. Prerequisite: P.E. 302, 311, 312.

**450. Senior Project.** (3) Designed to give the student an opportunity to initiate and develop a problem of interest to him in the area of health, physical education and recreation. A student may follow one or two plans: namely: (1) prepare a junior thesis utilizing the techniques of professional writing which adhere to an acceptable form; or (2) present a laboratory problem which may be a dance recital, intramural or recreational program, pageant, or play day. If plan (2) is followed the student must write a synopsis of the project accompanied by photographs or drawing and diagrams. Required of prospective graduating seniors. A senior should enroll in this course at least one quarter prior to the expected quarter of graduation.

#### **Health Education**

**151. Personal Hygiene.** (3) Emphasis is placed on positive health through a consideration of various conditions which affect health. A study of the care of the various systems of the body. Discussions center around food and nutrition; recreation and rest; care of the feet, hair, and skin; clothing; fads; and disease prevention. An elective for students fulfilling the 60-hour core curriculum in general education.

**211. Health Examination.** (3) Designed to give a general knowledge of those procedures established to determine the health status of the child and to relate ways and means of enlisting the cooperation of pupils, teachers, and parents in health protection. Required of all majors in health and physical education. Prerequisite: Health 151.

**212. School Hygiene.** (3) Concerned with giving general information regarding the total environment in which the individual lives while at school. Stress is placed on classroom conditions that are conducive to healthful living and the part the teacher, pupil, and janitor play in maintaining a healthful situation. Required of all majors in health and physical education. Prerequisites: Health 151, 211.

**213. Health Instruction.** (3) Emphasis is placed on a knowledge of children, sources of health information and materials, and ways of gathering information. Suggestions are made regarding techniques and procedures for discovering health needs, with special stress on practice in methods of planning, preparing, and presenting instructional units. Required of all majors in health and physical education. Prerequisites: Health 151, 211, and 212.

**301. Community Hygiene and Sanitation.** (3) Designed to acquaint students and teachers with practices and procedures in controlling the environment, especially such practices as are now used in the control of communicable diseases, food, water, waste materials, and other sanitation problems arising in communities. Various methods of ventilating, heating, and lighting in their relationships to health are stressed. An elective for students fulfilling the 60-hour core curriculum in general education. Required of majors in health and physical education. Prerequisites: Health 151, 211, 212, 213.

**302. First Aid.** (3) Major consideration is given to demonstration and practice of general first aid care of emergencies with specific stress placed on bandaging, the controlling of bleeding, administering artificial respiration, and the treatment of strains, bruises, burns, sprains, wounds and shock. A Red Cross Certificate is given for successful completion of the course. Required of all majors in health education, physical education and recreation. Prerequisites: Health 151, 211, 212.

**304. Family Health.** (3) Aims to acquaint the student with the important individual family, and community factors essential to healthful living. The significance of heredity, nutrition, and housing in effective family living is emphasized. Stress is placed upon the provision and use of health services for maternal and child care, and for the prevention of illness. The mental, physical, and emotional aspects of family health are also considered. Prerequisites: Nine quarter hours in health education. Required of all majors in health, physical education and recreation. Prerequisites: Health 151, 211, 212, 213, 301.

#### **Physical Education**

Courses numbered in the 100's and 200's include theoretical and practical work and are designed for majors and minors in health and physical education. All majors in health and physical education must select skills courses in the following sequential order: two digit, fundamentals and techniques, coaching and officiating. The two digit service course in the activity is required before enrolling into each fundamental and technique course, unless one can demonstrate proficiency in the basic elements of the activity. All HPER majors will be

evaluated separately in both two digit and three digit courses. Advancement to the Upper Division of this Department is contingent upon the results of these examinations in each two and three digit course.

- 101M. Fundamentals and Techniques in Football.** (1) Required of men majors.
- 101W. Fundamentals and Techniques in Field Hockey.** (1) Required of women majors.
- 103. Conditioning, Apparatus Work, Stunts and Tumbling.** (2) Require of majors.
- 201. Fundamentals and Techniques in Soccer and Speedball.** (1) Required of women majors.
- 202. Intermediate Swimming.** (1) Instruction in the fundamental arm and leg stroke techniques, plain diving, and elementary forms of rescue leading to Red Cross Certification. Required of majors and those seeking certification. Prerequisite: Ability to swim 60 feet.
- 203. Fundamentals and Techniques in Volleyball and Deck Tennis.** (1) Required of majors.
- 211. Fundamentals and Techniques in Modern Dance.** (1) Required of majors.
- 212. Fundamentals and Techniques in Basketball.** (1) Required of majors.
- 213. Fundamentals and Techniques in Softball.** (1) Required of majors.
- 221. Folk Rhythms.** (2) Dances that are peculiar to foreign countries such as Hungary, Germany, Sweden, Russia, and England are taught with emphasis upon the relationship of movements to customs and habits of each particular country. Opportunity for participating in mixers, rounds, and square dances with stress on the western type suitable for use on the upper elementary and secondary school levels. Required of majors.
- 222. Tap Rhythms.** (2) Materials included which serve as a functional basis both for in-school and out-of-school activities. Modern music used to develop routine in slow and fast fox trot and waltz-time. An elective for majors.
- 223. Modern Dance Composition.** (2) Experimentation in applying the basic laws of movement to contemporary dance and fundamental principles governing the development of dance movement into an art form for high school and college levels. An elective for majors. Prerequisite: P.E. 211.
- 231. Fundamentals and Techniques in Archery.** (1) Required of majors.
- 232. Advanced Swimming and Life Saving.** (1) A professional course for physical education teachers. Practice provided for all coordinate styles of swimming, instruction in life saving and water safety skills, and in techniques leading to the American Red Cross Senior Life Saving and Water Safety Certificate. An elective. Prerequisite: P.E. 202 or equivalent.
- 233. Fundamentals and Techniques in Tennis.** (1) Required of majors.
- 234. Fundamentals and Techniques in Track and Field.** (1) Require of majors.
- 235. Fundamentals and Techniques in Badminton.** (1) Required of majors.
- 236. Fundamentals and Techniques in Golf.** (1) An elective for majors.
- 237. Fundamentals and Techniques in Handball and Shuffleboard.** (1) An elective for majors.
- 239. Fundamentals and Techniques in Bowling.** (1) An elective for majors.
- 240. Social Dance.** (1) Required of majors.
- 242. Fundamentals and Techniques in Wrestling.** (1) An elective for men majors.
- 243. Play and Games for Elementary Schools.** (3) Acquaints the student with a knowledge of the theory and practice of rhythmic activities, mimetic activities, hunting games, story plays, games, sports, athletic games, and other activities as they are related to the elementary school. Considers and explains different methods of teaching these activities at various age and grade levels. Provides a careful study of some factors that make up a well rounded physical education program in the elementary schools including objectives of the program, organization of the program, and activities of the program. Discussions of play areas, equipment, and supplies. Required of majors and minors in physical education.
- 311. General Anatomy.** (3) Elementary course in gross anatomy designed to offer the student in health education and physical education, an opportunity to acquire a general knowledge of the gross structure of the human body. Required of all majors.
- 312. Kinesiology.** (3) A study of the bones, joints, ligaments, and muscles and their functions in the various movements involved in games, sports, and other physical education activities. Stresses ways of incorporating health education and physical education. Required of all majors of health and physical education, required of recreation majors.



**333. Principles and Philosophy.** (3) An application of anatomy, physiology, psychology, and sociology to physical education methods and procedures. Required of majors in physical education. Prerequisites: Educ. 201, Psych. 242, and 243.

**334. Physiology of Exercise.** A course designed to combine several science disciplines as the chronic and the transitory effects of exercise are studied. An elective for HPER majors. Prerequisites: Zoology 202, 203; PE 311, 312.

**401. Seminar in Health, Physical Education and Recreation.** (3).

For description, see "Courses in Health Education and Physical Education."

**402. Organization and Administration of Health and Physical Education.** (3)

For description, see "Courses in Health Education and Physical Education."

**403. Individual Physical Education for Handicapped Students.** (3).

For description, see "Courses in Health Education and Physical Education."

**404. Care and Prevention of Athletic Injuries.** (3).

For description, see "Courses in Health Education".

**413. Program Planning in Physical Education.** (3) Acquaints the student with the state and recommended programs in physical education. Stresses ways of incorporating physical education into the total school program. Emphasis is placed on plans and procedures for adapting programs to local conditions. An elective for majors and minors in health and physical education, required of recreation majors. Prerequisites: P.E. 243, 333, or 253.

**421. Athletic Coaching and Officiating in Football.** (2) Examination and explanation of rules, methods of organizing, practice and management of teams, strategy, team offense and defense, and various fundamentals and techniques in football. Required of men majors in health and physical education.

**422. Athletic Coaching and Officiating in Basketball.** (2) Fundamentals of basketball from a coach's and an official's point of view. Required of majors in health and physical education.

**442W. Athletic Coaching and Officiating in Basketball and Volleyball.** (2) Fundamentals of basketball and volleyball from a coach's and an official's point of view. An opportunity given for the student to qualify as a local or national official in basketball and/or volleyball. Required of women majors in physical education.

**PE 423. Athletic Coaching and Officiating in Track and Field.** (2) A required course for men and women majors which discusses fundamentals of track and field events from a coaching and officiating point of view. An opportunity is given the student to learn methods of organizing a track team; practice, scheduling, strategy in competition, diet, conditioning, and the psychology of coaching track and field events are discussed.

**431. Measurement and Evaluation in Physical Education.** (3) Acquaints the student with tests available in physical education. Deals with the theory, application, and administration of tests for use in evaluating the content and methods, measuring students' achievements, criteria for classification of students, and marking. Required of majors in health and physical education.

## **Recreation**

**253. Principles of Recreation.** (3) Designed to acquaint the student with the fundamentals of recreation and the techniques for organizing and promoting leisure-time activities for home, school and community. Aims to develop a philosophy of recreation consistent with the aims and objectives of education. An elective for health and physical education majors, required of recreation majors.

**301. Nature Education.** (3) Designed to assist students in their understanding of nature and its many aspects, including astronomy, ecology, birds, camping, cave exploration, flowers, gardening, hiking, hunting, Indian lore, mountains, nature craft, trailing, trees, and zoos. Experience is gained directly by the student in a natural setting.

**353. Playground Management and Supervision.** (3) Purposes to equip the student to manage and supervise playgrounds. Emphasizes program planning, current trends in principles, philosophy, skills, and techniques in playground management and supervision. An elective for health and physical education majors, required of recreation majors.

**412. Organization and Administration of Recreation.** (3) Aims to give the student a knowledge of the organizational, administrative, and supervisory policies and procedures utilized in the field of recreation. This knowledge is further supplemented with the skills and techniques necessary to prepare the student to meet and solve the many problems to be encountered as an administrator of recreation in parks, playgrounds, churches, camps, settlement houses, Christian associations, clubs, and community centers. An elective for health and physical education majors, required of recreation majors.

**414. Organization and Administration of Camping and Scouting.** (3) It is designed to give the student a general background and information about the organization and administration of camping and scouting and suggests means of helping the community or neighborhood organize itself to utilize the program.

**473. Field Experience.** (6) Supervised work experience by students in recreational agencies. The student is selected to be considered as a recreation employee subject to such requirements and responsibilities as evidenced in gainful employment in this area. Combines theory with practical experience in recreation.

**AH211. Care and Riding of Light Horses.** (3) (See description under Animal Husbandry). Approved elective.

**434. Festivals and Demonstrations.** (3) Organized to acquaint the student with materials, methods, and techniques of presenting pageants, festivals, exhibitions, athletic events, special celebrations, and events of a similar nature. Includes a study and discussion of activities calling for a large number of participants and methods of combining a number of areas as dancing, dramatics, crafts, and athletics. Required of women majors in HPE and all majors in recreation. An elective for men majoring in HPE.

**463. Dance Seminar.** (3) A concentrated learning experience in contemporary dance for undergraduate and graduate students, teachers of the elementary, junior and senior high school levels, college teachers and recreation employees. The content embraces modern dance technique, rhythmic form and analysis, modern dance history and methodology in dance. The Seminar will meet ten days, three and one-fourth hours daily.

**481. Organization and Administration of Intramural Activities.** (3) Lectures, discussions, and projects dealing with finance, equipment, types of tournaments, schedules, policies, and officiating. Required for Recreation Majors.

**483. History of Physical Education.** (3) The evolution of physical education from ancient time to the present. Considerations of the relationship of physical education to education and to national life and ideals during various historical periods. An elective.

## Music

### Undergraduate

#### Applied Music Courses

The laboratory fees, unless otherwise stated, are for each quarter.

**11A, B, C. First Year Piano.** (3) Some of the easier works of Bach, Haydn, Mozart, Beethoven, and others whose works are of equivalent technical value together with purely technical materials including all major and minor scales. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**21A, B, C. Second Year Piano.** (3) Selected works Bach, and other composers. Prerequisite: Permission from the Office of the Music Department, and Piano 11C. Two one-half hour periods. Laboratory fee \$7.00.

**31A, B, C. Third Year Piano.** (6) Larger compositions, and other exacting materials requiring excellent musicianship, skills and techniques are used. Prerequisite: Music 21C. Two one-half hour periods. Laboratory fee \$7.00.

**\*41A, B, C. Fourth Year Piano.** (6) The study of advanced piano materials. Prerequisite: Music 41C. Two one-half hour periods. Laboratory fee \$7.00.

**12A, B, C. First Year Organ.** (6) Pedal studies, major and minor scales, legato studies, little preludes and fugues of Bach, trios by Stainer Rheinberger, and others, and selected books of Guilman, Mendelssohn and other reputable composers. Prerequisite: The highest non-credit level of piano 10, and permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$20.00.

**22A, B, C. Second Year Organ.** (6) Advanced pedal studies and scales. Prerequisite: Music 12C. Two one-half hour periods. Laboratory fee \$20.00.

**32A, B, C. Third Year Organ.** (6) A continuation of pedal studies and scales in addition to the Toccate and Fugue in D Minor, and other major works, some from modern composers. Prerequisite: Music 22C. Two one-half hour periods. Laboratory fee \$20.00.

**\*42A, B, C. Fourth Year Organ.** (6) A continuation of Music 32C with special emphasis on representative works from the various schools of composition including 20th Century composers. Two one-half hour periods. Laboratory fee \$20.00.

**13A, B, C. First Year Violin or Viola.** (6) Instruction with standard elementary violin or viola materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

\* Approved for graduate credit.



**23A, B, C. Second Year Violin or Viola.** (6) Instruction with standard elementary violin or viola materials. Prerequisite: Music 13C. Two one-half hour periods. Laboratory fee \$7.00.

**33A, B, C. } Advanced Violin or Viola.** (6) Instruction with standard advanced violin or viola materials. Prerequisite: Music 23C. Two one-half hour periods. Laboratory fee \$7.00.

**14A, B, C. First Year Voice.** (6) The study of breath control, and voice placement in tone production. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**24A, B, C. Second Year Voice.** (6) The study of voice drills in voice placement, intonation, breathing, phrasing, diction, etc. Prerequisite: Music 14C. Two one-half hour periods. Laboratory fee \$7.00.

**34A, B, C. } Third and Fourth Year Voice.** (6) The study of drills in vocal techniques. Prerequisite: Music 24C. Two one-half hour periods. Laboratory fee \$7.00.

**15A, B, C. First Year Cornet (Trumpet or French Horn).** (6) Instruction with standard elementary materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**25A, B, C. Second Year Cornet (Trumpet or French Horn).** (6) The study of standard intermediate materials. Prerequisite: Music 15C. Two one-half hour periods. Laboratory fee \$7.00.

**35A, B, C. } Third and Fourth Year Cornet (Trumpet or French Horn).** (6) Instruction with standard advanced materials. Two one-half hour periods. Laboratory fee \$7.00.

**16A, B, C. First Year Trombone (Baritone Horn or Tuba).** (6) Instruction with standard elementary materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**26A, B, C. Second Year Trombone (Baritone Horn or Tuba).** (6) The study of standard intermediate materials. Prerequisite: Trombone 16C. Two one-half hour periods. Laboratory fee \$7.00.

**36A, B, C. } Third and Fourth Year Trombone (Baritone Horn or Tuba).** (6) Instruction with standard advanced materials. Two one-half hour periods. Laboratory fee \$7.00.

**17A, B, C. First Year Clarinet (or Flute).** (6) Instruction with standard elementary materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**27A, B, C. Second Year Clarinet (or Flute).** (6) The study of standard intermediate materials. Prerequisite: 17C. Two one-half hour periods. Laboratory fee \$7.00.

**37A, B, C. } Third and Fourth Year Clarinet (or Flute).** (6) Instruction with standard advanced materials. Two one-half hour periods. Laboratory fee \$7.00.

**18A, B, C. First Year Oboe (or Bassoon).** (6) The study of standard elementary materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**28A, B, C. Second Year Oboe (or Bassoon).** (6) Instruction with standard intermediate materials. Prerequisite: Oboe 18C. One-half hour periods. Laboratory fee \$7.00.

**38A, B, C. } Third and Fourth Year Oboe (or Bassoon).** (6) Individual instruction with standard advanced materials. Two one-half hour periods. Laboratory fee \$7.00.

**19A, B, C. First Year Saxophone.** (6) The study of standard elementary materials. Prerequisite: Permission from the Office of the Music Department. Two one-half hour periods. Laboratory fee \$7.00.

**29A, B, C. Second Year Saxophone.** (6) The study of standard elementary materials. Prerequisite: Saxophone 19C. Two one-half hour periods. Laboratory fee \$7.00.

**39A, B, C. } Third and Fourth Year Saxophone.** (6) Instruction with standard advanced materials. Two one-half hour periods. Laboratory fee \$7.00.

**10A, B, C. First Year Percussion.** (6) An intensive study of elements of percussion technic. Accent will be on snare drum rudiments. One full hour, or two half hour lessons per week. Permission of Department of Music.

**20A, B, C. Second Year Percussion.** (6) Continuation of above. Attention to bass drum and timpani. One full hour instruction per week.

**30A, B, C. Third Year Percussion.** (6) Intermediate materials for percussionists. Review of all rudiments, introduction of solo and ensemble materials for percussion. Attention to tuned percussion instruments. One full hour instruction per week.

**40A, B, C. Fourth Year Percussion.** (6) Advanced technic and literature for solo percussion instruments and percussion ensembles. Emphasis on recital literature in preparation for Senior Recital.

**134-5-6. String Instrument Class.** (3) The study of the fundamentals of bowing, fingering, construction and care of string instruments. Three periods.

**104. Woodwind Class (Clarinet).** (1) Fundamentals of tone production, technic, care, construction, and minor repair. Prerequisite: Permission of the Office of the Music Department. Two periods.

**105. Woodwind Class (Flute).** (1)

**106. Woodwind Class (Saxophone).** (1)

**107. Brass Class (Trombone).** (1) Fundamentals of care, construction, minor repair, and performance.

**108. Brass Class (Cornet).** (1)

**109. Percussion Class.** (1) Fundamentals of care and minor repair; study of technic of performance on most percussion instruments with emphasis on the snare drum. Two periods.

**305, 306. Orchestral Conducting.** (6) A study of the technic of conducting with particular emphasis on the use of the baton, score reading, program planning, and rehearsal procedures. An evaluation of orchestral and other instrumental music suitable for use in secondary schools. Prerequisite: Junior standing in Department of Music. Three lectures.

### **Major Ensemble Groups**

**Music 001. Men's Glee Club.** (1) The study and performance of representative material for male voices. Attention to both sacred and secular materials. Performance on and off campus. Membership open to any qualified male student in the University. Three (3) practices weekly.

**Music 002. String Ensemble.** (1) The study and performance of representative literature for string ensemble and small orchestra with special emphasis on material suitable for beginning string programs for the public school. Membership required for all string majors, open to all students with proficiency on a string instrument. Two (2) rehearsals per week.

**Music 003. University Choir: Chapel Choir.** (1) The study of a variety of the finest choral literature. Prerequisite: Permission from the Office of the Music Department. Three or more periods.

**Music 004. University Band.** (1) The study and performance of the finest band literature. (After the football season, the University Band becomes the Concert Band. For membership requirements see Band Director.) Prerequisite: Ability to satisfactorily play an instrument. Three or more periods.

**Music 005. Stage Band (Jazz Ensemble).** (1) Membership open to all University students by audition and competition. Activities include a study of playing techniques necessary for the performance of contemporary music for stage and recording, popular dance shows, show music, experimental music, and traditional and contemporary jazz/black music. Music majors must maintain concurrent membership in University Marching and Concert Bands. Two (2) rehearsals per week.

### **MUSIC EDUCATION**

**Music 301-2. Introduction to Public School Music.** (6) An introductory course in music for students in elementary education. Consists of a thorough study in music fundamentals, terminology, scales, keys, rhythms, and sight singing drills and dictation. Prerequisite: Permission from the Office of the Music Department. Three lectures.

**371a. Music Education.** (3) A study of principles, methods, materials, objectives, and procedures for teaching music in elementary schools. Prerequisite: Junior standing in Department of Music. Three lectures.

**371b. Music Education.** (3) A study of principles, methods, materials, objectives, and procedures for teaching music in secondary schools. Prerequisite: Junior standing in Department of Music. Three lectures.

**371c. Instrumental Methods.** (3) A study of methods, philosophies, materials, and objectives for teaching instrumental music from grade four (4) through grade twelve (12). Prerequisite: Junior standing in Department of Music. Three lectures.





371d. **Choral Methods and Materials.** (3) A study of the principles and problems of teaching voice, managing and directing choral organizations, and the analysis and evaluation of choral materials. Prerequisite: Permission from the Office of the Music Department. Three lectures.

434. **Seminar in Jazz.** (2) A study of the history of jazz and an analysis of the styles and major contributors. Two lectures.

#### **Music, History, Literature, and Appreciation**

131. **Music Appreciation.** (3) Emphasis on the development of the student's appreciation for the finest musical literature, and a constant extension of his listening repertoire. Only that history which will serve to make what he hears more meaningful to him is included. Three lectures.

337-8-9. **Music History and Literature.** (9) General information concerning the history of music. Embodies an analytical approach to music history, its growth and development. Prerequisite: Permission from the Office of the Music Department. Three lectures.

#### **Theory and Composition**

119. **Orientation to Music.** (2) Elementary instruction in basic language of music, scale formation, rhythms, sight singing, melodic dictation. Attention given to practice and study habits for music majors.

120-1-2. **Freshman Theory.** (12) Basic notation, intervals, scales and modes, rhythms, contrapuntal harmony, written and keyboard, sight singing and ear training; harmonic and form analysis. Prerequisite: Pass the basic Theory Test. Five lectures.

220-1-2. **Sophomore Theory.** (9) Aural and written harmony; keyboard harmony; figured bass; counterpoint; sight singing; ear training; analysis. Prerequisite: Music 122. Three lectures.

320-1. **Counterpoint.** (6) A study of the techniques underlying the principles used in writing good melodies and their association without losing independence. Prerequisite: Music 122. Three lectures.

420-1. **Forms and Analysis.** (6) A study of compositions in the smaller and larger forms. Prerequisite: Music 321. Three lectures.

430. **Orchestration.** (3) A systematic study and application of the techniques for utilizing the capabilities of orchestral and band instruments in Music Composition. Prerequisite: Music 321. Three lectures.

428. **Physics of Music.** (3) Theoretical and applied considerations of sound production and promulgation; the tempered scale, and other scales; the acoustical basis of wind and stringed instruments; analysis of complex tones produced by human voice and certain wind instruments. Prerequisite: Music 222. Three lectures.

433. **Composition.** (3) A study of composition and the application of creative ability along systematic lines in writing original larger forms. Prerequisite: Permission from the Office of the Music Department. Three lectures.

451. **Senior Recital.** (2) Credit given only upon successful completion of public senior recital. Prerequisite: Permission of major applied instructor.

Music 000. **Performance Seminar.** (0) Required of all music majors each quarter of matriculation during regular school year. For a satisfactory grade (S) each music major must attend 75% of all scheduled recitals and seminars presented by student and faculty performers. First and third Thursday of each month.

Orientation, 101-02-03

General Psychology, 221-22-23

\*Educational Psychology I, Human Development, 242

\*Educational Psychology II, Psychology of Learning, 243

Elementary Statistics, 311

\*Measurement and Evaluation, 312

Abnormal Psychology, 321

Mental Hygiene, 323

Social Psychology, 341

Experimental Psychology, 411-12-13

Physiological Psychology, 431

Senior Project, 450

Differential Psychology, 461

\*Service courses in Core Program for Teacher Education; do not carry credit for majors in psychology.



## **Introduction to Psychological Testing, 463**

### **\*Guidance for Classroom Teachers, 463**

## **History and Schools of Psychology, 481-82**

**100. Corrective Reading.** (0) The purpose of this course is to provide instruction in reading which will aid students to achieve more in accord with their potential. Emphasis will be placed upon the following: Correcting deficiencies in basic word analysis skills, improving comprehension and critical reading skills, developing a larger and more functional vocabulary, and correcting spelling deficiencies. The course is also designed to provide conditions for positive growth and change in students' own self-concept.

**101-02-03. Orientation for Psychology Majors.** (3) General orientation to college and introduction to the area of psychology as a profession. Students given opportunity to make self appraisal of abilities, aptitudes, interests, reading level, and study habits; and to improve reading level and study habits. One hour credit each quarter. Required of Freshman majors in psychology.

**221-22. General Psychology.** (6 Hrs.) The basic course in general psychology; designed to acquaint the student with the fundamental principles of human behavior and experience, the scope of psychology, and the methods of psychological research. Course is a prerequisite for all "advanced" courses in psychology; is required of all students majoring or minoring in psychology, and is recommended for students in education.

**223. General Psychology.** (3) Prerequisite Psych. 221-22. Required of psychology majors, and open as an elective to non-majors who desire to further explore the content and nature of general psychology. Offers a critical consideration of psychological systems, and methodology, and a review of the fields of psychology.

**242. Educational Psychology I, Human Development.** (3) The first in a sequence of two courses in educational psychology. Designed to give the student an understanding of the child as a growing organism, of how behavior is acquired, and the relationship between growth and learning. Required in the professional Education Core.

**243. Educational Psychology II, Psychology of Learning.** (3) Prerequisite Psych. 242. The second in a sequence of two courses in educational psychology. Designed to introduce the student to learning theory and the implications of learning theory for classroom teaching, and to give the student training in the application of psychological principles to the various functions of the school. Required in the Professional Education Core.

**311. Elementary Statistics.** (3) Offers training in tabulating and processing scores and other data; covers measures of central tendency, measures of variability, the normal curve, and simple correlation.

**312. Measurement and Evaluation in Public Schools.** (3) Offers training in administering, scoring, processing, and using the results of standardized tests and other measures of progress in public schools; also training is offered in the construction of objective tests. Prerequisite Psych. 242 and 243. Required in the Professional Education Core.

**321. Abnormal Psychology.** (5) Lectures, discussions, and review of case studies concerning the nature, causes, and treatment of pathological behavior. Observation trips shall be made to institutions for the care and treatment of mental patients.

**323. Mental Hygiene.** (3) Primarily concerned with examining and interpreting procedures for protecting and preserving the mental health of the individual through wholesome adjustment to the environment; attention is given to the practice of mental hygiene in the classroom. (Service course not accepted for major credit).

**341. Social Psychology.** (3) Lectures and discussions of social behavior and application of principles of psychology to social behavior.

**351. Developmental Psychology.** (5) Primarily concerned with the evolution of human behavior. The course surveys human growth and development of behavior from fertilization through adult life, with major emphasis on psychological processes.

**411. Research Methodology in Psychology.** (3) This course is designed to introduce the student to methods of research in the behavioral sciences. Specifically the course will offer the student experiences in designing research problems in psychology, with attention focused on experimental design and the scientific approach to problem solving. The student will be expected to design a research project for the senior project (Psych. 450) seminar course. Course open to psychology majors of senior classification (or who have completed 24 hours of 300 and 400 level courses in psychology) and is prerequisite to Psychology 412-13, Experimental Psychology, and Psychology 450, Senior Project Seminar.

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\* Service courses in Core Program for Teacher Education; do not carry credit for majors in psychology.

**412-13. Experimental Psychology.** (6) Offers training in applying the scientific procedure of experimentation to the study of psychological phenomena in the various fields of psychology.

**431. Physiological Psychology.** (5) A study of the sensory, motor, and adjustor (brain) mechanisms as they relate to behavior.

**450. Senior Project.** (3) Required of all seniors. Under the supervision of the student's adviser, each senior shall complete a project appropriate to the student's major area. The completed project must be approved by the student's adviser and the head of the department. Three typewritten copies of the project are to be turned in before a grade is awarded. One copy will be returned to the student.

**461. Differential Psychology.** (3) An intensive study of individual differences, with emphasis on discovery, measurement, and interpretation.

**462. Introduction to Psychological Testing.** (3) Designed to give the student an understanding of the basic principles underlying psychological measures; officers training in selection and use of psychological tests, and practice in both group and individual testing.

**463. Guidance for Classroom Teachers.** (3) Designed to train classroom teachers in providing guidance to their pupils. Attention is given to the functions, techniques, and tools of guidance, and to the organization and execution of guidance programs. Required in the Professional Education Core.

**481-82. History and Systems of Psychology.** (6) Special attention to the historical development of psychology as a science, and to the fundamental concepts of the various schools of psychology.

### **Correctional Services**

**CS 201 — Introduction to Correctional Services.** 3 Hrs. A survey of the field of Correctional Services designed to acquaint the student with the variety of services offered and the variety of individuals and groups who may need such services.

**CS 301 — Survey of Correctional Institutions and Practices.** 3 Hrs. A detailed study of institutions (Public and Private) which offer correctional services; the operation and practices of such institutions, and the type or kind of individual the institution is designed to serve.

**CS 311 — Interviewing and Counseling Juvenile Delinquents.** 3 Hrs. Adapts the techniques of interviewing and counseling to juvenile delinquency, including the assessment procedures as well as the counseling function of helping a person to solve a personal problem.

**CS 341 — Social Work as a Profession.** 3 Hrs. (See Soc. Wel. 341)

**CS 342 — Social Welfare.** 3 Hrs. (See Soc. Wel. 342)

**CS 360 — Group Leadership.** 3 Hrs. (See Soc. Wel. 360)

**CS 381 — Correctional Services and Problems of Deprived Groups.** 3 Hrs. The course shall focus on the special problems of deprived youth, and how correctional services personnel may ameliorate or help solve some of the problems.

**CS 412 — Criminology.** 3 Hrs. (See Soc. 412)

**CS 451 — Juvenile Delinquency.** 3 Hrs. (See Soc. 451)

**CS 452 — Control and Prevention of Juvenile Delinquency.** 3 Hrs. An examination of the causes of delinquency and crime and of preventive procedures that have proved to be effective.

**CS 453 — Probation and Parole of Juvenile Delinquency.** 3 Hrs. A defining of the purposes or desired outcomes of probation, and parole and an analysis of procedures followed, and their effectiveness.

**CS 493 — Social Control.** 3 Hrs. (See Soc. 493)

**CS 471 — Sensitivity Training for Correctional Personnel.** 3 Hrs. The course offers experiences by which the prospective worker may acquire sensitivity to the needs, feelings, aspirations, etc. of the several groups of persons, including adolescents.

**CS 481 — Observation and Field Experiences.** 3 Hrs. The student will spend approximately 3 hrs a day observing and participating in correctional activities in an institution under supervision.

**CS 450 — Senior Project Seminar.** 3 Hrs. The student conducts a minor research in the area of correctional services and submits a written report of the research. The project may be carried out during the period of supervised observation and practice.









## SCHOOL OF ENGINEERING

W. J. CARTER, B.S., M.S., Ph.D., Dean

### GENERAL INFORMATION

The School of Engineering is divided into two articulated components of technical education, namely:

1. A Bachelor of Science Degree program with curricula in Architectural, Civil, Electrical and Mechanical Engineering.
2. An Industrial Education Program with teacher training curricula in Industrial Arts Education and Aviation Education both of which lead to the Bachelor of Science Degree.

Engineering is the profession in which a knowledge of the mathematical and natural sciences gained by study, experience and practice is applied with judgment to develop ways to utilize economically, the materials and forces of nature for the benefit of man. The professional engineer's work is mostly mental in character. He studies and reasons and visualizes how new bits of scientific knowledge may be put to practical use. The vast majority of engineers do not need or require a manual dexterity with tools. Engineering students are trained rigorously and thoroughly, on a broad basis, in a coherently related sequence of subjects in physical science and mathematics, in social-humanistic subjects; and in their chosen professional or vocational discipline.

The School of Engineering prepares its students, to become successful practicing engineers, or to pursue higher academic degrees and become research engineers or teachers. The successful engineer must have mental ability and alertness of a high order; must develop sound judgment; must be willing to try; must recognize failures; and must keep on trying until he arrives at a satisfactory solution of the problem at hand. The facilities of the School of Arts and Sciences, and the School of Education are also available to the students in the School of Engineering. The useful knowledge and mental discipline gained in these other schools also constitutes excellent preparation for other careers, and a life of useful service and leadership.

The School may revise from time to time any of its curricula in order to conform with technological advancement or for purposes of accreditation. All students must satisfactorily complete the prescribed courses under their curriculum in order to qualify for the Bachelor of Science degree.

The School of Engineering of Tennessee State University is located in the greatest area of industrial expansion in the Southeast. It is within two hundred miles of the Tennessee Valley Authority and the Atomic Energy Commission's Oak Ridge Plant; within 150 miles of the Arnold Air Development Research Center at Tullahoma, Tennessee; and the Marshall Space Center at Huntsville, Alabama; near the foundry and steel mills of Middle Tennessee and Alabama and in the midst of the largest source of hydro-electric power in the East.

The School of Engineering has a physical plant consisting of:

1. Engineering Building—In this building are located the foundry, electrical, physical testing, cement and soils, combustion engines, refrigeration and air-conditioning, hydraulics, model-making laboratories, three drafting rooms; classrooms; and offices.
2. Industrial Arts Building—In this building are located the machine, welding, sheet metal, refrigeration, household appliance vocational technical training shops.
3. The Vocational Shop Building—The masonry, printing and auto mechanics areas are located in this building.
4. Mechanical Engineering and Heating Building—This building houses the steam engineering laboratories and contains a packaged Westinghouse Turbine-Electric Generating Unit; and a horizontal steam engine with indicator and prony brake.

## ENGINEERING CORE

The following subjects are required in all engineering fields of specialization:

Mathematics and Physical Science	46	22%
Analytic Geometry and Calculus . . . . .	20	
Differential Equations I & II . . . . .	6	
General Chemistry . . . . .	8	
General Physics . . . . .	12	
Communications	24	12%
English Composition . . . . .	9	
Speech . . . . .	3	
Technical Report Writing . . . . .	3	
Engineering Problems . . . . .	3	
Engineering (Architect.) Graphics . . . . .	6	
Engineering Science	31	15%
Digital Computer Science . . . . .	3	
Mechanics—Statics . . . . .	5	
Strength of Materials . . . . .	5	
Materials Testing . . . . .	3	
Thermodynamics . . . . .	3	
Fluid Mechanics . . . . .	3	
Electrical Circuit Theory . . . . .	6	
Engineering Economics . . . . .	3	
Humanities and Social Studies	21	10%
American History and Government . . . . .	9	
Literature . . . . .	3	
Economics Principles . . . . .	3	
Electives . . . . .	6	
General Education or University Requirements	9	5%
AFROTC—(Air Science) or Physical Education . . . . .	6	
Business Law . . . . .	3	
Total . . . . .	131	64%

The program of study in the first year precedes, and is also common to, all fields of specialization. A freshman program of study is shown below.

### First Year Engineering

(Common to all engineering programs except Arch. Engr.)

Freshman	I	II	III
Analytic Geom. Calculus I and II— Math 163, 261-62 . . . . .	5	5	5
General Chemistry—Chem. 111-12 . . . . .	4	4	
English Composition—Eng. 101-02-03 . . . . .	3	3	3
Engr's. Problems—Engr. 101 . . . . .	3		
Engr's. Graphics—Engr. 102-03 . . . . .		3	3
General Physics—Physics 221 . . . . .			4
Physical Education or AFROTC 151-52-53 . . . . .	1	1	1
	<hr/>	<hr/>	<hr/>
Credit Hours Per Quarter . . . . .	16	16	16
Total Credit Hours—48			

## DEPARTMENT OF ARCHITECTURAL ENGINEERING

ROBERT S. ARMSTEAD, B.S., P.E., Head

The Department of Architectural Engineering offers a course of study leading toward a professional degree. Courses are designed to develop technical knowledge and insight into architecture in order to meet the highest professional standards. The primary objective is to encourage the student to investigate the fundamental principles of organic order and to develop individually a medium of controlling architectural forms for man's protection and accommodation.

Unusual opportunities are available through close contact with the many other engineering courses and research programs offered by the school. The architectural engineering curriculum integrates these technical resources with social and cultural needs.

The graduate will find many opportunities for employment with private firms, industrial establishments or governmental agencies. With additional years of experience the graduate architectural engineer may engage in private business after meeting registration requirements of the state in which he desires to practice. Minimum quarter hours required for Bachelor of Science degree in Architectural Engineering are 228.

### CURRICULUM IN ARCHITECTURAL ENGINEERING

Freshman Year				Sophomore Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
English 101-02-03	I	II	III	Math 261-62-63	I	II	III
Math 161-62-63	3	3	3	Civil Engineering 203	5	5	5
Chemistry 111-12-13	5	5	5	Physics 221-22-23	4	5	4
Engineering 102, 203	4	4	4	Engr. 201	4	4	4
Engineering 101	3	3	3	Arch. Engr. 201-2-3	5		
American Government 222	3		3	Arch. Engr. 213	4	3	3
History 201-202	3	3		Civil Engr. 213		3	
Air Science I or Phy.				Civil Engr. 213			3
Ed. 11-12-13	1	1	1	Air Science II or Phy.			
				Ed. 20's to 50's	1	1	1
	19	19	19		19	21	16

Junior Year				Senior Year			
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
Arch. Engineering 301-2-3	I	II	III	Arch. Engr. 401-2-3	I	II	III
Arch. Engineering 311-12-13	3	3	3	Arch. Engr. 411, Arch. Engr.	4	4	5
Arch. Engr. 322	2	2	2	422, Arch. Engr. 433	2	2	1
Arch. Engr. 332		4		Arch. Engr. 443			4
Arch. Engr. 333		2		Engr. 450			3
Civil Engr. 302-303		3	3	Arch. Engr. 452		4	
Civil Engr. 343		3	3	Arch. Engr. 463			4
English 211-212	3		3	Civil Engr. 332	4		
Mech. Engr. 322	3			Civil Engr. 442		3	
Civil Engr. 333		3		Elect. Engr. 301-2	3	3	
Electives	3		3	Engr. 401	3		
Speech 202	3						
	17	17	20		16	16	17

### DEPARTMENT OF CIVIL ENGINEERING

W. J. CARTER, B.S., M.S., Ph.D., Acting Head

Civil Engineering, once defined as including all branches of engineering other than military engineering is now limited to the professional aspects of construction. Civil Engineering includes the location, design, construction, and maintenance of larger scale facilities such as railroads, highways, dams, airports, bridges, buildings, concrete and foundation designs, canal and river systems; and piers, docks, and harbors. Other Civil Engineers make maps and charts; plan, design, and construct city streets, water supply and distribution systems, sewage disposal plants, and urban traffic control systems. Education in this field is founded on scientific fundamentals with extensive training and practice in one or more fields of professional specialization including structural, hydraulic, soil mechanics, transportation, and sanitary engineering.

### REQUIREMENTS IN CIVIL ENGINEERING

Core Requirements for all Engineering Students	131 Credit Hrs.
Departmental Requirements	72 Credit Hrs.
World Literature	3
Computer Science	3
Dynamics	5

## Civil Engineering Core

CE 213 Plane Surveying .....	3	
CE 301 Strength of Materials .....	3	
CE 302-03 Theory of Structures .....	6	
CE 312-13 Fluid Mechanics .....	6	
CE 331 Engineering Geology .....	3	
CE 322 Highways .....	3	
CE 332 Soil Mechanics .....	3	
CE 343 Concrete I .....	3	
CE 402 Contracts and Specifications .....	3	
CE 422 Waterworks and Sewerage .....	3	
CE 441-42 Design of Structures .....	8	
CE 443 Foundations .....	4	
CE 450 Senior Project .....	3	
Technical Electives .....	10	
Total .....	203	Credit Hrs.

## CURRICULUM IN CIVIL ENGINEERING

The following program is recommended to assure an even application of effort by students in Civil Engineering:

Freshman, Sophomore—All engineering students pursue the same freshman schedule.

Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Calculus III, Diff Equations				Speech .....	3		
I, II, Math 263, 462-63 .....	5	3	3	Engr. Geology, CE 331 .....	3		
General Physics-Physics				Fluid Mechanics,			
222-23 .....	4	4		CE 311-12-13 .....	3	3	3
Mechanics, Engr. 202-02 .....	5		5	Electrical Circuit Theory,			
World Literature Eng. 211-12	3	3		EE 301-02 .....	3	3	
Computer Science,				Hist. 201-202, Amer.			
Engr. 220 .....		3		Gov't. 222 .....	3	3	3
Strength of Materials,				Business Law, BA 323 .....	3		
CE 203, 301 .....		5	3	Theory of Structures,			
Plane Surveying, CE 213 .....			3	CE 302-03 .....		3	3
Economic Principles,				Foundations, CE 443 .....			4
Econ. 211 .....			3	Soil Mechanics, CE 332 .....		3	
Physical Education or				Materials Testing, EC 333 .....		3	
AFROTC 251-52-53 .....	1	1	1	Concrete I, CE 343 .....			3
	18	19	18		18	18	16

Name of Course	Quarter Hours Credit		
	I	II	III
Thermodynamics, ME 301 .....	3		
Waterworks and Sewage,			
CE 421 .....	3		
Design of Structures,			
CE 441-42 .....	4	4	
Contracts and Specifications,			
CE 402 .....		3	
Numerical Techniques,			
Engr. 332 .....		3	
Highways, CE 322 .....			3
Engineering Economics,			
Engr. 463 .....			3
Senior Project, CE 450 .....	3		
Technical Electives .....	3	3	4
Gen. Educ. Electives .....		3	3
Technical Report Writing,			
English 324 .....			3
	16	16	16



## DEPARTMENT OF ELECTRICAL ENGINEERING

M. J. MALKANI, M.S., Head

The electrical engineer is concerned with the production of electrical power at dams, at steam and nuclear power plants, and from chemical and solar devices. He designs equipment and devices for converting mechanical, chemical and thermal energy into electrical energy. He designs control systems used in aircraft and missiles, factories and hospitals, automobiles and home appliances. The electrical engineer is concerned with communication systems that consist of telephone and telegraph equipment, radio and television, communication satellites and other innovations of the future. He utilizes electromagnetic theory to design microwave equipment, antennas and lasers. He develops methods for processing rapidly large amounts of information by designing high-speed computers and by devising computer techniques. The electrical engineer is the designer of diversified equipment such as the heart-lung machine of medicine and the radio telescope of astronomy. He seeks engineering solutions to ecological problems such as developing an electrical alternative to the internal combustion engine.

Specialization in various areas of electrical engineering is provided through a choice of technical electives. The technical electives are based on a common core of electrical engineering fundamentals.

### Requirements in Electrical Engineering

Core Requirements for all Engineering Students	131 Credit Hrs.
Departmental Requirements	71 Credit Hrs.
Mechanics (Dynamics)	5
General Education Courses	3
Electrical Engineering Core	
EE 211-12-13 Electrical Circuit Theory	3
EE 321-22-23 Electromagnetic Theory	9
EE 331-32-33 Electronics	9
EE 341-42-43 Energy Conversion	9
EE 411-12 Control Systems	6
EE 421-22 Networks and Systems	6
EE 450 Senior Project	3
EE 451-52 Communication Theory	6
EE 473 Solid State	3
Technical Electives	9
Total	202 Credit Hrs.

A requirement for graduation in the Department of Electrical Engineering is that a student can have a grade of D in no more than 6 hours of his electrical engineering courses and 12 hours of his technical courses.



## Curriculum in Electrical Engineering

The following program is recommended to assure an even application of effort by students in electrical engineering:

Freshman, Sophomore—All engineering students pursue the same freshman schedule.

Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
General Physics—				Networks I and II,			
Physics 222-23	4	4		EE 421-22	3	3	
Mechanics—Engr. 201-02	5		5	Electronics, I, II, III,			
Calculus III, Diff. Equations				EE 331-32-33	3	3	3
I, II, Math 263, 462-63	5	3	3	Energy Conversion I, II, III,			
Circuits I, II, III (Electrical—				EE 342-43	3	3	3
EE 211-12)	3	3	3	Fluid Mechanics—CE 311	3		
Computer Science,				Business Law, BA 323	3		
Engr. 220		3		History, Hist. 201, 202	3	3	
Strength of Materials,				American Government,			
CE 203		5		Pol. Sci. 222			3
Speech 202			3	Economic Principles—			
Gen. Education Elective			3	Econ. 211		3	
Physical Education or				World Literature—			
AFROTC 251-52-53	1	1	1	English 211			3
				Technical Report Writing,			
				English 324			3
				Materials Testing,			
				CE 333			3
	18	19	18		18	15	18
Senior Year							
Name of Course	Quarter Hours Credit			Name of Course	Quarter Hours Credit		
	I	II	III		I	II	III
Communication Theory,							
EE 451-52	3	3					
Control Systems I, II,							
EE 411-12	3	3					
Electromagnetic Theory I,							
II, III, EE 321-22-23	3	3	3				
Thermodynamics, ME 301	3						
Engr. Econ. Engr. 463			3				
Solid State, EE 473			3				
Senior Project, EE 450	3						
Technical Electives	3	3	3				
Gen. Education Electives		3	3				
	18	15	15				

## DEPARTMENT OF MECHANICAL ENGINEERING

CHARLES W. SUTHERLAND, B.E., M.S., Head

The Mechanical Engineer is concerned with the design and manufacture of machines, tools, and devices, used in the transmission and transformation of mechanical energy. The three major fields of Mechanical Engineering are: (1) Heat Power, (2) Machine Design, and (3) Management of manufacturing processes. He designs machines that function smoothly and safely such as: internal combustion engines for automobiles and aircraft; steam engines; pumps; refrigerating, ventilating and air conditioning equipment; pulleys, cranks, levers and gears, including their lubrication, vibration characteristics, critical speeds and sufficiency in size. In the manufacturing processes he determines the proper working space for men and machines, the sequence and efficiency of operations, the disposition of wastes, and the utilization of by-products.

The mechanical engineering core and departmental requirements serve as a strong base for any of the above interests. The technical elective subjects which complete the curriculum may be selected in such manner that a particular area of interest is enhanced.

## Requirements in Mechanical Engineering

Core requirements for all Engineering Students .....	131 Credit Hrs.
Departmental Requirements .....	71 Credit Hrs.
World Literature .....	3
Descriptive Geometry .....	3
Computer Science .....	3
Dynamics .....	5
Electrical Circuit Theory .....	3

## MECHANICAL ENGINEERING CORE

ME 211-12 Manufacturing Process .....	6
ME 302-03 Thermodynamics .....	6
ME 313 Kinematics .....	3
ME 323 Heat Transfer .....	3
ME 322, 404 Metallurgy .....	6
ME 401, 02, 03 ME Laboratory .....	6
ME 411-12 Machine Elements .....	3
ME 422 Environmental Control .....	3
ME 451-52 Energy Conversion .....	6
ME 450 Senior Project .....	3
Technical Electives .....	9
Total .....	202 Credit Hrs.

## CURRICULUM IN MECHANICAL ENGINEERING

FRESHMAN—Common to all Engineering Students.

Sophomore Year				Junior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Calculus III, Diff. Equations I, II, Math 263, 462, 463 .....	5	3	3	Thermodynamics I, II, III, ME 301, 02, 03 .....	3	3	3
Physics, Gen. Physics 222, 223 .....	4	4		Electrical Circuit Theory and Electronics, EE 211, 12, 331 .....	3	3	3
Mechanics, Engr., 201, 202 .....	5			World Literature, Eng. 211, 212 .....	3	3	
Mfg. Processes, ME 211, 212 .....		3	3	American History, Hist. 201, 202 .....	3	3	
Computer Science, Engr. 220 .....		3		Government Pol. Sci. 222 .....			3
Strength of Materials, CE 203 .....		5		Business Law, BA 323 .....	3		
Des. Geometry Engr., 203 .....			3	Fluid Mechanics, CE 311 .....	3		
Speech, 202 .....	3			Economic Principles, Econ. 211 .....		3	
Physical Education or AFROTC, 251, 252, 253 .....	1	1	1	Kinematics, ME 313 .....			3
Gen. Education Elective .....			3	Materials Testing, CE 333 .....			3
				Metallurgy, ME 322 .....			3
	18	19	18		18	15	18

Senior Year			
Quarter Hours Credit			
Name of Course	I	II	III
Report Writing .....	3		
Computer Science, Engr. 330 .....			3
Energy Conversion, ME 451, 452 .....	3		
Heat Transfer, ME 323 .....	3		
Environmental Control, ME 422 .....		3	
Engineering Economics, Engr. 453 .....			3
Senior Project, ME 450 .....			3
Metallurgy, ME 404 .....	3		
Machine Elements, ME 411 .....	3		
ME laboratory, ME 401, 402, 403 .....	2	2	2
Technical Electives .....		3	6
Gen. Education Elective .....		3	
	17	14	17

## DEPARTMENT OF INDUSTRIAL EDUCATION

W. V. HARPER, Ed.S., Head

The Department of Industrial Education consists of several curricula for the preparation of teachers of Industrial Arts, and personnel for the construction, printing, and aviation industries. As advances are made in industry and the technical areas, the Department of Industrial Education will alter its curricula to meet the industrial and technological demands.

The department offers undergraduate courses that lead to the Bachelor of Science degree and also, graduate courses that may be applied towards the Master of Arts in Education Degree or for professional improvement of teachers-in-service.

### CURRICULUM IN INDUSTRIAL ARTS EDUCATION

P. E. STEWART, Coordinator

The Industrial Arts Curriculum is organized to offer experiences that will prepare young men and women as teachers of Industrial Arts in junior and senior high schools, and to provide experiences for all students who wish to develop an appreciation for an understanding of the technological society in which he lives.

Students majoring in Industrial Arts Education must meet all requirements of the University with regards to its Teacher Education Program. Such requirements are listed under the School of Education as "General Information on the Teacher Education Program."

Successful completion of the Industrial Arts Curriculum leads to the Bachelor of Science degree and qualifies one to obtain a state teaching certificate in Industrial Arts.

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-02-03	3	3	3	English 211-12-13	3	3	3
Math 111-12; Math 113				Hist. 201-02-03	3	3	3
or I. E. 172	4	3	3	Natural Science 121-22-23	4	4	4
P. E. 11-12-13 or				Edu. 201, Psy. 242-43	3	3	3
Aerospace Studies				*I.A. 141, 151, Aero 111	3	3	3
151-52-53	1	1	1	P. E. 20's-50's or			
I. A. 101-02-03	3	3	3	Aerospace Stud. 251-52-53	1	1	1
*I. A. 111-121-131	3	3	3				
Hea. 151, Art 133		3	3				
I. E. 101	3						
	17	16	16		17	17	17
Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Edu. 301-387, Psy. 312	3	3	3	Edu. 462, Psy. 463	3	3	
Pol. Sc. 222, IA 301				IE 331-32	3	3	
Phil. 323	3	3	3	IE 472			15
Electives 300-400 Level	3	3	3	IA 311, 453	3	3	
**Shop Electives	3	3	3	IE 371, 450	3	3	
Shop Electives	3	3	3	Aero 321-323	3	3	
Aero 311-313-322	3	3	3	Shop Electives	3	3	
	18	18	18		18	18	15
TOTAL QUARTER HOURS REQUIRED FOR GRADUATION				202			

\*These courses need not be taken in the order listed. All should be taken during the freshman and sophomore years.

\*\*Shop Electives may be chosen from the list of shops that follows: A minimum of nine quarter credit hours in at least three shops; and for certification purposes, not over 15 quarter hours credit in any one shop: Woodworking, Metalworking, Printing, Crafts, Electricity, Power and Transportation.



## CURRICULUM IN TECHNICAL AERONAUTICS

**CECIL M. RYAN, Coordinator**

The curriculum in Technical Aeronautics is designed to enable students to acquire the basic knowledge and skills required to qualify for gainful occupations in aviation, aerospace industries, airplane manufacturing corporations, or private aeronautical service enterprises. Upon completion of these required courses, the student will be prepared technically and academically to offer many contributions to our highly technical, space-age society. He is adequately prepared to open a general aeronautical service operation on his own, or may utilize these basic fundamentals to enhance rapid advancement in an armed services career if so desired. As advancements are made in aeronautics, this curriculum area will change its offerings to meet the demands of industry.

Freshman Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
English 101-2-3	3	3	3
IA 101-2-3	3	3	3
Aero. 101-2-3	3	3	3
Math. 111-12-13	4	3	3
Aero. 111-12-13	3	3	3
P.E. 11-12-13 or A.S. 151-2-3	1	1	1
	17	16	16

Sophomore Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Eng. 211-12-13	3	3	3
Aero. 201-02-03	3	3	3
Sci. Ed. 121-21-23	4	4	4
Hist. 202-03, Pol. Sci. 222	3	3	3
IE 101, Hea. 151, Art 133	3	3	3
P.E. 20's thru 50's or A. S. 251-52-53	1	1	1
	17	17	17

Junior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Aero. 301-02-03	3	3	3
Aero. 321-22-23	3	3	3
M.E. 211-B.A. 201	3	3	
B.A. 323, 329, 335	3	3	3
Aero. 311-12-13	3	3	3
1.A. Shop Electives	3	3	3
Math 294 (Computer Sci.)			2
	18	18	17

Senior Year	Quarter		
	Hours	Credit	
Name of Course	I	II	III
Philosophy 323			3
Aero. 401-2-3	3	3	3
Aero. 411-12-13	3	3	3
I.E. 450			3
Electives (300 and 400)		3	3
B.A. 326, Acct. 211	3	4	
Health 212	3		
Electives (300 and 400)	3	3	
	15	16	15

TOTAL QUARTER HOURS REQUIRED FOR GRADUATION ..... 199

## CURRICULUM IN BUILDING CONSTRUCTION

**LEON C. FARBES, Coordinator**

The curriculum in Building Construction is designed to meet the needs of students who wish to acquire principles of light frame and small commercial building construction. Related work is given in planning, estimating, and the necessary related technical information concerning materials and processes of related trades. This curriculum gives basic information in management and business operation which enables students to obtain positions as construction supervisors, materials salesmen and contractors after they have had a reasonable amount of practical experiences in actual building construction.

The curriculum in Vocational Industrial Education Building Construction is designed for two purposes: (1) To train young men and adults to make a living by acquiring the necessary skills and techniques (areas of concentration—carpentry, electricity, drawing and masonry) for employment in industry, and (2) to offer experiences which will prepare trade and industrial teachers for the State of Tennessee after two or more years of journeyman experience.



Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-02-03	3	3	3	English 211, IA 131	3	3	
Math 111-12, Math 113 or I. E. 173	4	3	3	Speech 202, Hea. 151	3	3	
Bus. Finance 102			3	Acct. 211			4
IA 101-02-03	3	3	3	B.C. 212-13-14	3	3	3
BC 101-02-03	3	3	3	B.C. 221-22-23	3	3	3
P.E. 11-12-13 or Air Sci. 151-52-53	1	1	1	Nat. Sci. 121-22-23	4	4	4
IE 101	3			P. E. 20's-30's or Air Sci. 251-52-53	1	1	1
Business Prin. 101		3		Edu. 201			3
	17	16	16		17	17	18

Summer—IE 374. Summer Industrial Internship (12) (Prior to junior year.)

Summer—IE 475. Summer Industrial Internship (12) (Prior to senior year.)

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Psy. 242-43	3			B. C. 332	3		
Hist. 202-03	3	3		Bus. Law 323-24-25	3	3	3
Pol. Sci. 222			3	B. C. 412		3	
IE 331, 333	3	3		IE 411-431-435	3	3	3
B. C. 411			3	IE 450, IE 412	3	3	
B. C. 421-22-23	3	3	3	B.C. 413			3
Engineering 211-12-13	3	3	3	Electives 300-400 Level			3
B. C. 302, 303, 431	3	3	3				
	18	15	15		12	12	12

TOTAL QUARTER HOURS REQUIRED FOR GRADUATION . . . . . 209

## CURRICULUM IN TECHNICAL PRINTING

GILBERT K. PLEASANT, Coordinator

The curriculum in Vocational Industrial Education Printing is designed to contribute to the efforts of Tennessee State University in achieving its purpose of preparing leaders and citizens in general for intelligent participation in their environment.

Specifically this curriculum is designed to (1) train young men and women to make a living by acquiring necessary skills and techniques for employment in industry, (2) offer experiences which will prepare trade and industrial teachers for the state of Tennessee, (3) offer additional training for in-service teachers, and (4) provide research in the field of letterpress and offset printing.

Freshman Year				Sophomore Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
English 101-02-03	3	3	3	Natural Sci. 121-22-23	4	4	4
Math. 111-12, Math. 113 or IE 173	4	3	3	Eng. 211-12-13	3	3	3
Health 151		3		Prtg. 201-02-03	3	3	3
IA 101-02-03	3	3	3	Hist. 202-03	3	3	
P.E. 11-12-13 or Air Sci. 151-52-53	1	1	1	Pol. Sci. 222			3
IA 141-42-43	3	3	3	P.E. 20's-50's or Air Sci. 251-52-53	1	1	1
Art 133			3	Elem. Acct. 211-12-13	4	4	4
IE 101, IA 121-131	3	3	3				
	17	19	19		18	18	18

Junior Year				Senior Year			
Quarter Hours Credit				Quarter Hours Credit			
Name of Course	I	II	III	Name of Course	I	II	III
Prtg. 301-02-03	3	3	3	Bus. Law 323-24-25	3	3	3
BC 302-303 or IA 332-33		3	3	IE 431, 435		3	3
IE 331, 411	3		3	Elect. 300-400 Level	3	3	3
English 301-02-03	3	3	3	Prtg. 401-02-03	3	3	3
Elect. 300-400 Level	3	3	3	IE 450	3		
	12	12	15	Electives 300-400 Level		3	
					12	15	12

IE 374. **Summer Internship** (12) The Summer Industrial Internship is required at the end of Student's Junior Year for (12) twelve quarter hours credit.

TOTAL QUARTER HOURS REQUIRED FOR GRADUATION ..... 199

## **COURSE DESCRIPTION—SCHOOL OF ENGINEERING**

Numerals in parentheses describe time requirements, thus:

(1-4-3)—1 hour of theory per week; 4 hours laboratory per week; course yields 3 qtr. hours credit.

## **COURSE DESCRIPTION—SCHOOL OF ENGINEERING**

**101. Engineering Problems.** (3-0-3) An introduction to the engineering profession including: nature of engineering; the use of the slide rule; techniques in the analysis solution and presentation of engineering problems: lectures by engineers from industry; and inspection trips to local engineering projects. A minor engineering design project is required.

**102. Engineering Graphics.** (1-2-3) Standard engineering lettering, line and figure drawing with instruments, the correct representation of objects, models, and machine parts in orthographic, isometric, and oblique projections, as well as practice in dimensioning and the reading of drawings. Six laboratory hours per week.

**103. Engineering Graphics.** (1-6-3) Representation of screw threads, fasteners, springs, gears, pipe drawing. Working drawings of machine parts. Freehand lettering and technical sketching. Required of all engineering and industrial education students. Prerequisite: Engineering 102 or equivalent. Six laboratory periods.

**104. Nomography.** (1-0-1) Design, construction and use of Nomographs or alignment charts in the solution of engineering problems, rectification of curves from laboratory data; use of log and semi-log graphs: derivation of empirical equations. One lecture per week. Prerequisite: Math 163; Engr 102.

**201. Mechanics-Statics** (5-0-5) The application of the principles of mechanics to static engineering problems including: resultants; equilibrium; friction; free body diagrams; trusses; centroids and center of gravity; moment of inertia; and forces in beams and cables. Vector analysis is introduced and used. Prerequisite: Math 262, and Physics 211.

**202. Mechanics-Dynamics.** (5-0-5) The application of the principles of mechanics to engineering problems of motion and acceleration including: rectilinear, curvilinear and rotary motion; work and energy; impulses and momentum; and introduction to vibrations. Prerequisite: Math 263, and Engr 201.

**203. Descriptive Geometry.** (1-6-3) An elementary study of the geometry of the point, line and plane, with theoretical and practical problems. Curved surfaces, their tangent lines and planes; the intersection of surfaces, developments, shades and shadows, perspective. Prerequisite: Engineering 103. Six laboratory periods.

**204. Descriptive Geometry.** (1-6-3) A continuation of Engr 203.

**220. Computer Science.** (3-0-3) Formulation of numerical problems for solution on digital computer; programming in currently acceptable language. Prerequisite: Math 163.

**330. Analog Computer.** (2-2-3) Basic principles and techniques employed in the simulation and model analysis of physical systems and controls. Analysis of dynamic systems described by ordinary differential equations. Problem preparation and scaling; operational amplifiers, multipliers and function generators. Prerequisite: Math 462.

**332. Numerical Methods in Engineering.** (3-0-3) Numerical solutions of systems of linear and nonlinear equations; numerical differentiation and integration; numerical solutions of ordinary and partial differential equations. Prerequisite: Math 462.

**400-401. Special Topics in Engineering.** (10-0-1) to (6-0-6). Special subjects presented in the School of Engineering to cover current problems or unique advances in the state of the art. Prerequisite: Senior standing or consent of the instructor. Three hours per week including biweekly laboratory.

**404. Applied Math I.** (3-0-3) Matrix Algebra and ordinary differential equation and their application to Engineering problems. Prerequisite: Math 262.

**403. Applied Math III.** (3-0-3) Introduction to complex analysis and boundary value problems. Prerequisite: Math 462 or Applied Math I or consent of instructor.

**422. Engineer in Training License Review** (0-0-0) A course designed to prepare student for the EIT examinations, a partial requirement for obtaining license as a professional engineer. The subject matter will be drawn from six subject areas; Mathematics, Engineering Mechanics, Fluid Mechanics, Mechanics of Materials, Electricity and Chemistry.

**451. Analog Computer Technique.** (0-3-0) Methods and techniques simultaneous linear and non-linear differential equations on electronic analog computers; principles of multiplication, division and simulation of non-Linear devices and systems. Prerequisite: EE 310 and Math 462.

**463. Engineering Economics.** (3-0-3) Economic factors involved in the acquisition and retirement of capital goods in engineering practice including: interest and capitalization methods of depreciation; amortization, sinking funds; cost and rate determination; linear programming and critical path techniques.

#### **COOPERATIVE PLAN**

The following core courses are offered in all degree programs by the Faculty of the individual departments. Students in the Cooperative Plan require 5 years to graduate.

**210. Cooperative Plan.** (15) Work experience under the guidance and supervision of practicing engineers in government or industry. Open to cooperative plan students only. Emphasis on professional and personal development including reliability, efficiency and teamwork. Written report required of student. Passing grade awarded upon evidence of satisfactory job performance. Prerequisites: Completion of 30 credit hours of college work including English 102 with Grade Point Average of 2.5 or better, and preregistration as full time student.

**220. Cooperative Plan.** (15) Continuation of Cooperative Plan 210.

**230. Cooperative Plan.** (15) Continuation of Cooperative Plan 220.

**310. Cooperative Plan.** (15) Work experience. Open to cooperative plan students only. Continuation of Cooperative Plan 230. Written report required of student. Passing grade awarded upon evidence of satisfactory job performance. Prerequisites: Completion of 100 credit hours of college work with Grade Point Average of 2.5 or better, and pre-registration as a full time student.

**320. Cooperative Plan.** (15) Continuation of Cooperation Plan 310.

**330. Cooperative Plan.** (15) Continuation of Cooperative Plan 320.

**410. Cooperative Plan.** (15) Work experience. Open to cooperative plan students only. Continuation of Cooperative Plan 330. Written report required of student. Passing grade awarded upon evidence of satisfactory job performance. Prerequisites: Completion of 150 credit hours of college work with Grade Point Average of 2.5 or better, and pre-registration as a full time student.

**420. Cooperative Plan.** (15) Continuation of Cooperative Plan 410.

**430. Cooperative Plan.** (15) Continuation of Cooperative Plan 420.

#### **ARCHITECTURAL ENGINEERING**

**201. Architectural Design II, Small Structures.** (4) Introduction to architectural design; expressions of principles, in structural and aesthetic relationship. Prerequisite: Engr. 101. Three three-hour laboratory periods per week.

**202. Architectural Design II, Small Structures.** (3) Problems of more complex nature involving principles, materials, space concepts and site relationship. Prerequisites: Arch. Engr. 201. Four two-hour laboratory periods per week.

**203. Architectural Design II, Intermediate Design.** (3) Design of small structures. Problems emphasizing design and the use of materials in the development of creative activity. Prerequisites: Arch. Engr. 201-202. Three two-hour laboratory periods per week.

**213. Engineering Materials.** (3) Prefabricated building materials, manufacturing processes, characteristics of new and old materials; emphasis on relationships between common use of materials and imagination; techniques directed toward limitations and potentialities. Prerequisites: Arch. Engr. 202. Three two-hour laboratory periods per week.

**301-2-3. Architectural Design III, Composition.** (9) The design of architectural problems of a complex nature involving principles of organic order and the use of structural elements, site relationship, form and logical concepts. Relation of design concepts to space and the process of architectural composition. Problems in planning with close co-ordination of site, materials, human needs and structural harmony. Prerequisites: Arch. Engr. 203-213. Three three-hour laboratory periods per week.

**311-12-13. History of Architecture.** (6) Materials and forms of Architecture and related arts of the past and of the present, including emphasis on social, religious and political life. Prerequisites: Arch. Engr. 202-213.



**322. Working Drawings.** (4) Development of various techniques in drafting, representing materials and methods. Elementary construction drawing for small buildings and furnishings. Prerequisite: Arch. Engr. 301. Four two-hour laboratory periods per week.

**332. Sanitation.** (2) Elements of engineering investigation and reports involving the design and installation of hot and cold water systems for domestic and commercial use. Local and national codes. Selection of fixtures, private water supply and disposal systems. Prerequisites: Arch. Engr. 203, Physics 223. One hour lecture and two two-hour laboratory periods per week.

**333. Architectural Construction.** (3) Methods of building construction and the assembly and use of building materials. Studies on building types old and new. Prerequisite: Arch. Engr. 213.

**401. Architectural Design IV, Planning.** (4) A continuation of Architectural Engr. 303, principles applied in a series of more complex problems; each problem presented on a design need covering the whole field of architectural procedures. Prerequisites: Arch. Engr. 303, 321-22-12. Five two-hour laboratory periods per week.

**402. Architectural Design Planning.** (4) For completion of senior standards of Architectural Engineering this course is continued by course 403. All seniors are given practical problems within the community, having an actual site and having to meet requirements given by the faculty and concerned persons outside the university. Prerequisites: Arch. Engr. 322, 401. Five two-hour laboratory periods per week.

**403. Architectural Design—Advanced Planning.** (5) Continuation of Architectural Design 402. One single problem guided by the faculty; working drawing, specifications and contract will be presented to the consultants upon presenting final completed problem. Prerequisites: Arch. Engr. 321-22-411. Five two-hour laboratory periods per week.

**411. Estimating and Supervision.** (2) Estimating construction cost for the building trades; methods and procedures in the supervision of building construction. Prerequisites: Arch. Engr. 333.

**422. Specifications.** (2) Writing of architectural specifications and specification documents; duties and responsibilities of the architect from a professional standpoint.

**433. Professional Practice.** (1) Principles on the proper performance of the duties of an architect, ethical, moral and legal responsibilities; requirements for proper types of contracts and the architect's responsibility in the community. Requirement for registration. Prerequisites: Arch. Engr. 303, Civil Engr. 303. One lecture period per week.

**443. Building Equipment.** (4) The selection, use and design of and mechanical equipment for buildings; problems involving cost, maintenance and purchasing of standard and custom design equipment.

**450. Senior Project.** (3)

**452. Heating and Air-conditioning.** (4) Design and layout of heating and air conditioning systems, (hot water, steam warm air, radiant, electrical and solar), basic principles in determining heat gain and heat losses in structures, selection and use of equipment for year-round conditioning. Prerequisite: Physics 223.

**463. Electrical Applications in Buildings.** (4) Electrical lighting, equipment and circuit design in modern buildings. Prerequisite: Elect. Engr. 301-2.

## CIVIL ENGINEERING

Numerals in parentheses describe time requirements, thus:

(1-4-3)—1 hour of theory per week; 4 hours laboratory per week; course yields 3 qtr. hours credit.

**203. Strength and Materials I.** (5-0-5) The application of the principles of mechanics to engineering problems of strength and stiffness of materials including: internal force; axial stress and strain, including thermal effect; thin walled pressure vessels; torsion, beams, shear and moment diagram; riveted and welded connections. Prerequisite: Engr. 201.

**213. Plane Surveying.** (1-4-3) An elementary course in surveying and care and use of instruments. Emphasis will be placed on the following proficiencies: Use of surveying, instruments in construction surveying, including: alignment, grades and layout of buildings; field note procedure, leveling and measuring angles; measurement of distance by tape and stadia, design, calculation and layout of circular, spiral and vertical curves; introduction to optical tooling. Prerequisite: Math 163.

**301. Strength and Materials I.** (3-0-3) Continuation of Strength of Materials I, including determinate and indeterminate beam deflections and reactions by integration; moment-area; energy methods, and theory of three moments. Columns; combined stresses; reinforced beams, curved beams and unsymmetrical loadings. Prerequisite: CE 203.

**302. Theory of Structures I.** (3-0-3) General review of engineering statics; stress analysis, statistically determinate structures under service loads; classification of structures based on stability and determinacy; bending, shear, and axial stresses in beams and their graphical representation; stress analysis of trusses; graphic statics; influence lines of determinate structures; three-hinged arches and Gerber beams; cables and miscellaneous types of determinate structures; qualitative analysis of strain in determinate structures. Prerequisites: CE 301.

**303, 304. Theory of Structures II.** (3) III (3) (3-0-3) Stress analysis in indeterminate structures; comparison of methods of stress analysis of determinate and indeterminate structures; concepts of elastic energy and virtually work due to moment, shear, axial stress, torsion and thermal effect; moment-area and elastic-load methods, and Castiglione's theorems; Betti-Maxwell law; analysis of the continuous beam and Clapeyron's generalized equation; influence lines and effect of variable moment of inertia; slope-deflection method and elements of moment distribution, Matrix analysis; relaxation, infinite series. Use of digital computer. Prerequisite: CE 302.

**305. Advanced Engineering Mechanics.** (3-0-3) The basic analytical equations involved in the mechanics of structures, including: elasticity and plasticity; buckling, stability and instability. Use is made of variational techniques and energy and matrix methods. Prerequisite: SE 301.

**311-12-13. Fluid Mechanics.** (2-2-3) Static, dynamic and thermodynamic properties of real and ideal fluids; laminar, turbulent, compressible and incompressible flow; Euler, Bernoli and continuity equations; flow in channels, conduits and about immersed objects; measurement of properties of common fluids and tests on fluids in motion. Three lectures per week in CE 311-12. Two lectures and one lab per week in CE 313. Prerequisite: Engr 201; Math 262.

**322. Highways.** (3-0-3) A study of the modern field and office practices in the location and design of highways including economics, right of way acquisition, earth-work, geometric design, drainage structures, construction and maintenance problems. Written reports of field inspections of at least two local projects. Prerequisite: CE 213, CE 332.

**331. Engineering Geology.** (2-2-3) A study of earth materials, surface features, minerals and rocks, surface and internal structures and their relationship to engineering works. Analysis of the agents of weathering erosion, disastrophism and their effects on engineering construction. Study of aerial photographs, topographic and geological maps.

**332. Soil Mechanics.** (2-2-3) Principles of soil mechanics involving consolidation theory, shear, bearing capacity, pressure distributing compaction and seepage problems. Laboratory tests to determine Atterberg Limits, unconfined compressions, grain size analysis, maximum density, direct shear permeability tests, triaxial tests. Lectures and problems on piers and foundations, earthdams, earth slides, highway fills and subgrades, retaining walls, piles, frost heaving and ground water. Three hours per week including biweekly laboratory of three hours.

**333. Materials Testing.** (1-4-3) Behavior of engineering materials under load in the elastic and plastic range, including: use of testing machines; use of mechanical, optical and electrical strain measuring instruments; tension, compression, torsion, bending and hardness tests; study of ASTM and AAHO specifications; one lecture and two labs per week. Prerequisite: CE 301.

**343. Fundamentals of Reinforced Concrete Design.** (3-0-3) Rectangular sections in bending, shear and diagonal tension, bond and anchorage, design of one-way slabs, T-sections in bending and column design. Prerequisite: CE 303.

**402. Contracts and Specifications.** (3-0-3) The legal principles underlying engineering work: business organization; proposals, construction contracts and bidding procedures; insurance and surety bonds, wages, mechanics liens, workmens compensation, state and national laws and regulation; and specification writing. Prerequisite: Business Law 323.

**411. Advanced Surveying.** (2-2-3) Theory of Errors; office computations and application of the theory of least squares to the adjustment of triangulation, traverse and level nets. Map projections and the state plane coordinate system. Field astronomy and introduction to photogrammetry. Three lectures and one biweekly laboratory of two hours. Prerequisite: CE 213.

**412. Traffic Control.** (3-0-3) Study of traffic congestion, road and street capacity, regulation of moving traffic, parking regulations, pedestrian control, traffic signs and signals, traffic counts, traffic laws and regulations, traffic accidents, and street modifications. Prerequisite: CE 322.

**413. Transportation.** (3-0-3) A study of the engineering and economic problems common to the design, construction and maintenance of highways, airports, railroads, water transport facilities, pipelines, and conveyor systems; including their impact upon city and regional planning. Prerequisites: CE 322 and Engr. 463.

**414. Highway Materials.** (2-2-3) Properties of concrete and bituminous materials including their compatibility with various aggregates. Design of asphalt cement surface courses, soil-cement surfaces. Standard tests are performed with emphasis on interpretation of test results. Two lectures and two laboratory hours per week. Prerequisite: ME 333.

**421. Water Supply.** (3-0-3) Planning of water supply systems; population estimation, industrial and municipal water demand, hydrologic consideration of surface and ground water sources, design of distribution systems and impoundment works, water quality criteria, unit operations, and processes of water treatment.

**422. Sewerage and Sewage Treatment.** (3-0-3) Hydraulics of sewage works and appurtenances, functional design of storm and sanitary sewer systems, chemical and biological characteristics of sewage, unit operations, processes of sewage treatment, stream pollution. Prerequisite: CE 313.

**423. Environmental Pollution and Controls.** (3-0-3) A study of the characteristics of air and water contaminants from industrial and domestic sources; their effect and methods of control; air pollution surveys, and organization of control programs.

**432. Hydrology.** (3-0-3) Principles, methods of analysis, and applications for engineering planning and design. Major topics include the various phases of the hydrologic cycle, data collection and interpretation, water resources system, determination of flow capacity for hydraulic structures, use of electronic computers, and statistical analyses. Prerequisite: CE 421.

**441. Design of Steel and Timber.** (2-4-4) The analysis and design of structural elements and connections for buildings, bridges and specialized structures, including: roof and bridge trusses, plate girders and built-up columns and main compression members. Prerequisite: CE 303.

**442. Fundamentals of Reinforced Concrete Design.** (3-0-3) Design of isolated, combined and wall footings, two way reinforced floor slabs, flat slab floor systems, and shear heads for flat plates. Prerequisite: CE 343.

**443. Foundations.** (3-2-4) Design of dry and sub-aqueous foundations, such as piers, footings, abutments; principles and practices in piling and underpinning including bearing capacity and settlement analysis, character of natural soil deposits and earth pressure theories and application of soil mechanics to designing of foundations. Prerequisite: CE 332.

**450. Senior Project.** (0-6-3) All seniors are required to select and execute a project under the supervision of their major adviser to be approved by the chairman of the school. It may involve the design and making of a project complete with drawings, pictures, specification and detail data involved in its construction; or, a research and compilation of a subject within the field of the student's interest. Must give a written and oral report.

**451. Plate and Shell Structures.** (3-0-3) Membrane stresses in tank and roof shells; applications of plate theory; discontinuity stresses in dome and tanks; barrel shell roofs. Three lectures. Prerequisite: CE 305.

**452. Design of Steel II.** (2-2-3) Plastic design of steel, including: structural properties of ductile and strain hardening materials, moment rotation characteristics of structural members, equilibrium methods of analysis, upper and lower bound theorems, mechanism methods, modification of the simple flexural theory, and the rules of design. Prerequisites: CE 303, CE 305, two lectures and two laboratory hours per week.

**453. Behavior of Reinforced Concrete Members.** (2-4-4) Studies of the behavior and strengths of reinforced concrete members, beams subjected to pure flexure, columns under axial compression and eccentric loading, introduction to prestressed concrete. Emphasis is placed on the background, use and limitations of present design specifications. Prerequisite: CE 442.

## **ELECTRICAL ENGINEERING**

Numerals in parentheses describe time requirements, thus:

(1-4-3)—1 hour of theory per week; 4 hours laboratory per week; course yields 3 qtr. hours credit.

**EE211. Circuits I. (3-0-3)** Fundamental concepts of charge, current, voltage and power. Definition of passive and active ideal circuit elements. Kirchhoff's laws, mesh and nodal analysis, superposition, Thevenin's and Norton's theorems, duality. Transient response of RLC circuits to singularity excitations. Prerequisite: preceded or accompanied by Math 261. Biweekly laboratory.

**EE 212. Circuits II. (3-0-3)** Response of RLC circuits to sinusoidal forcing functions, phasors, concept of impedance, time average power. Exponential forcing functions, complex frequency, impedance loci, resonance. Prerequisite: EE 211. Biweekly laboratory.

**EE 213. Circuits II. (3-0-3)** Magnetically coupled circuits, ideal transformers, two-port networks, network topology, polyphase circuits, Fourier series and integral, Laplace transform. Prerequisite: EE 212. Biweekly laboratory.

**EE 321. Electromagnetic Theory I. (3-0-3)** Vector analysis, vector algebra, co-ordinate systems and transformations. Coulomb's law, E and D fields, Gauss's law, divergence, concept of potential, potential gradient, boundary conditions of E and D, current density, capacitance. Prerequisite: preceded or accompanied by Math 463.

**EE 322. Electromagnetic Theory II. 3-0-3** Poisson's and Laplace's equations, Biot-Savart law, Ampere's law, B and H fields, Stokes' theorem, magnetic potentials, boundary conditions of B and H. Time-varying fields and Maxwell's equations. Uniform plane wave. Prerequisite: EE 321.

**EE 323. Electromagnetic Theory III. (3-0-3)** Application of electromagnetic theory to transmission lines, waveguide structures, microwaves devices, and antennas. Prerequisite: EE 322.

**EE 331. Electronics I. (3-0-3)** Semi-conductor materials, P-N junction, diode characteristics, ideal and piecewise linear models. Transistor physics, basic transistor circuit design, biasing. Prerequisite: EE 213. Biweekly laboratory.

**EE 332. Electronics II. (3-0-3)** Transistor circuit design and analysis. AC and DC coupled circuits, frequency response improvement, positive and negative feedback. Prerequisite: EE 331. Biweekly laboratory.

**EE 333. Electronics III. (3-0-3)** Specialized transistor circuits and devices, FET's MOSFET, UJT, and photo devices. Prerequisite: EE 332. Biweekly laboratory.

**EE 341. Energy Conversion I. (3-0-3)** Theory and analysis of magnetic circuits, two-winding and auto-transformers. Essentials of voltage generation (Faraday's law) and torque production (Ampere's law) as applied to electromechanical energy conversion devices. Prerequisite: EE 213. Biweekly laboratory.

**EE 342. Energy Conversion II. (3-0-3)** Theory, analysis, performance, and applications of three-phase induction motors, synchronous motors, and DC machines. Analysis of servo motors by the method of symmetrical components. Prerequisite: EE 341. Biweekly laboratory.

**EE 343. Energy Conversion III. (3-0-3)** Theory, analysis, and performance of single-phase induction motors. Dynamic behavior of DC motors, servo motors and amplidyne generators. Direct energy conversion methods. Prerequisite: EE 342. Biweekly laboratory.

**EE 404. Industrial Control Electronics. (3-0-3)** Large-signal high-power devices such as SCR and power transistors with associated circuitry. Application to design of AC and DC motors, speed controls, AC and DC generator controls, temperature and light regulating systems. Demonstrations and class projects. Prerequisite: EE 333.

**EE 411. Control Systems I. (3-0-3)** Theory and operation of automatic control systems. Introduction to analysis and design of continuous linear feedback control systems by methods root locus and frequency response. Stability, transient errors, and steady state errors. Prerequisite: EE 213. Biweekly laboratory.

**EE 412. Control Systems II. (3-0-3)** Introduction to discrete-time systems and their response as analogous to continuous control systems. Classical compensation of continuous-time and discrete-time control systems. Analysis of continuous and discrete-time systems by the method of state variables. Prerequisites: EE 411, EE 421. Biweekly laboratory.

**EE 413. Control Systems III. (3-0-3)** Matrix algebra and state variable concept of linear and non-linear feedback systems. The second method of Liapunov applied to stability problems. Prerequisite: EE 412.

**EE 421. Networks I. (3-0-3)** Systems and signals, linear network elements, elementary matrix algebra. Network analysis by methods of cut and tie set. State variable techniques including the state transition matrix and transition equations. Prerequisite: EE 213.

**EE 422. Networks II. (3-0-3)** State equations approach to linear systems. Network graphs, signal flow graphs, analysis by the methods of Fourier, Laplace and Z-transformations, transfer function of a linear system. Prerequisite: EE 421.



**EE 443. Energy Conversion IV.** (3-0-3) Methods of direct energy conversion. Solar, thermoelectric, photoelectric, fuel cells, nuclear and magnetohydrodynamic energy converters. Energy conversion systems. Prerequisite: CE 311 and ME 301.

**EE 450. Senior Project.** (3-0-3) A theoretical or experimental project on special topics in electrical engineering coupled with a technical report and a seminar. May be taken in any quarter of the Senior year. Prerequisite: Senior standing.

**EE 451. Communication Theory I.** (3-0-3) Representation of signals in time and frequency domains, Fourier series and transform, convolution. Analysis of signals in linear systems, ideal filters, realizability, bandwidth and rise time, power spectral density. Prerequisite: EE 422.

**EE 452. Communication Theory II.** (3-0-3) Frequency and time division multiplexing, modulation and demodulation of signals including amplitude, angle, and pulse modulation techniques. Noise, sources of noise, signal-to-noise ratio, performance of various communication systems in noise, coding. Introduction to information theory, digital communication systems. Prerequisite: EE 451.

**EE 455. Antennas.** (3-0-3) Introduction to antenna theory. The Hertzian dipole, radiation pattern, radiation resistance, linear antennas, linear arrays. Survey of practical antennas. Prerequisite: EE 323.

**EE 471. Electronics IV.** (3-0-3) Linear wave shaping techniques using diode clipping circuits, clamping circuits, and other resistance switching devices. The transistor as a switch, "and" and "or" diode and transistor logic circuits. Lab demonstrations. Prerequisite: EE 333.

**EE 472. Electronics V.** (3-0-3) Transistor switching circuits. Monostable, astable, and bistable multivibrators with gating and triggering circuits. Voltage and current sweep circuits. Lab demonstrations. Prerequisite: EE 471.

**EE 473. Solid State Theory.** (3-0-3) Atomic structure of solids, metals, crystals. Band theory, energy levels, holes and electrons, mean-free time, mobility. Thermistors, P-N junction, diodes, transistors, and photoconductive cells. Phenomena of ferromagnetism, ferroelectricity, and piezoelectricity.

## **MECHANICAL ENGINEERING**

Numerals in parentheses describe time requirements, thus: (1-4-3)—1 hour of theory per week; 4 hours laboratory per week; course yields 3 qtr. hours credit.

**211. Manufacturing Process-Metal Fabrication.** (3-0-3) Pattern making, pattern design and materials. Fundamental principles underlying manufacturing processes in the area of casting. Classroom discussion and demonstration.

**212. Manufacturing Process-Metal Fabrication.** (3-0-3) Fundamental principles underlying manufacturing processes in the area of machine tools. Classroom discussion and demonstration. Prerequisite: ME 211.

**301. Elementary Thermodynamics.** (3-0-3) Thermodynamics properties of gases, vapors, and mixtures. Transformation of energy, theoretical limitations. First law, second law, absolute temperature, entropy and available energy; properties of ideal gases, liquid, vapors and vapor mixtures. Prerequisite: Math 263.

**302. Thermodynamics.** (3-0-3) Energy relations of one-dimensional steady flow of compressible fluids applied to the De-Valay nozzle, simple orifice, and lone pipe, simple single-stage impulse turbine; ideal power cycles; thermodynamics and processes of moist air, and other applications. Prerequisite: ME 301.

**303. Thermodynamics.** (3-0-3) Application of principles of thermodynamics to selected problems of energy conversion systems-electrical, chemical and thermal fluid flow of compressible media, cycle analysis. Prerequisite: ME 302.

**313. Kinematics.** (2-2-3) Analysis of mechanisms. A study of instantaneous centers, velocities, accelerations, and forces in plane mechanisms by analytical and graphical methods. Prerequisites: Math 263, Engr. 103 and Engr. 202.

**322. Metallurgy.** (3-0-3) An introductory course where the structure of materials is studied in sequence from atoms to crystals, to phases, to microstructures. Phase equilibria is considered from a theoretical viewpoint and then applied through the introduction of the Iron-Iron Carbide system. Prerequisites Chem. 113, Phy. 222.

**323. Heat Transfer.** (3-0-3) Heat transfer by conduction, convection, and radiation, mass transfer, diffusion; analogs, applications to solve engineering problems. Prerequisite: ME 302.

**401, 402, 403. ME Laboratory.** (0-4-2) A comprehensive senior laboratory sequence where the student is taught how to measure thermal, physical and mechanical properties and

introduced to instrumentation. He will also learn how to write a detailed engineering report. Experiments will include: metallurgical examination, internal combustion engines, heating and air conditioning.

**404. Metallurgy II.** (3-0-3) Application of equilibrium diagrams to the physical and mechanical properties of metals and alloys and their heat treatment, with emphasis placed on iron and steel. The Band Theory of electrical conduction is introduced. Ferromagnetism, recovery, recrystallization, and grain growth as well as practical working understanding of various steels is offered. Prerequisite: ME 322 (Required of ME majors).

**402. Mechanical Engr. Measurements.** (1-4-3) A study of methods of simulating problems in mechanical engineering, and the study of stresses, deformation, dynamic characteristics, fluid and heat flow characteristics of different systems. Prerequisite: Math 462.

**411. Machine Elements.** (2-2-3) A study of rolling and sliding contact including belts, chains, cams and tooth gearing in plain and epicyclic train. Introduction to the design of machine elements. Prerequisite: ME 313.

**412. Machine Design.** (1-4-3) The design of machine parts including shafting, gears, brakes, clutches, bearings, (sliding and anti-friction), springs, fly-wheels and frames. Prerequisite: ME 411.

**413. Advanced Machine Design.** (1-4-3) The proportioning of machine elements by the application of mechanics and the principles of strength of materials modified by practical considerations, together with an elementary study of friction and lubrication. Prerequisite: ME 412.

**422. Environmental Control I.** (3-0-3) Refrigeration cycles, refrigerant properties, heating, cooling loads; psychrometry; processes for heating; cooling, humidifying, dehumidifying, purifying; heat transfer principles; controls. Prerequisite: ME 303.

**423. Environmental Control II. Design.** (3-0-3) Principles of heating, ventilating and air conditioning systems in current use. Heat loss and gain computations. Design and layout of heating and air conditioning system. Prerequisite: ME 422.

**432. Mechanical Vibrations.** (3-0-3) Undamped and damped vibrations with one or two degrees of freedom; multiple degrees of freedom, forced vibrations, multi-mass transverse and torsional systems and balancing. Three hours per week. Prerequisites: Math 463, ME 313.

**433. Gas Dynamics.** (3-0-3) Principles of viscous and turbulent fluid flow in ducts, nozzles, blade passages; impulses and momentum; dimensional analysis and laws of similarity; compressible flow in ducts; effect of area change, heat addition, friction, and normal shocks, Thermodynamics of chemically-reacting flow. Prerequisite: ME 303.

**441. Lubrication.** (3-0-3) Principles of bearing analysis including: manufacture and properties of lubricants, hydrodynamics and hydrostatic lubrication, journal and thrust bearings, ball and roller bearings, Navier-Stokes equations, bearing materials and applications to design. Three lectures per week. Prerequisite: Math 263.

**442. Automatic Controls.** (3-0-3) Theory of control systems including open-loop and close-loop with emphasis on mechanical, hydraulic, thermal, and pneumatic systems: application of the analog computer to the solution of differential equations. Corequisite: Engr. 330.

**450. Senior Project.** (0-6-3) A designed project in the major field of study applying analytical and experimental techniques to the solution of problems.

**451. Mechanical Energy Conversion I.** (3-0-3) The theory of power and propulsion engines utilizing a gas as the working substance. Gas turbines, and spark and compression ignition reciprocating engines. Applications to automotive transportation, aircraft propulsion, and stationary-power systems. Prerequisite: ME 303.

**452. Mechanical Energy Conversion II.** (3-0-3) The steam power plant. Studies and tests in steam-electric power plant, boilers, steam turbines, electric generators, synchronous motor, pumps, and heat exchange apparatus, including condensers and cooling towers. Prerequisite: ME 451.

**462. Internal Combustion Engines.** (3-0-3) The study of spark ignition and compression ignition engines; combustion, detonation, carburetion and fuels. Prerequisite: ME 303.

## **INDUSTRIAL EDUCATION**

### **Industrial Education Courses**

**101. Orientation.** (3) Acquaints the student with the departmental requirements, makes him aware of our present-day industrial and technological demand, with some of the implications for the future, and his role in our modern society. Three lecture periods each week.

**173. Technical Mathematics.** (3) The study and application of basic mathematical principles and concepts as related to modern industrial technology. Subject matter is selected from



the fields of Arithmetic, Trigonometry, and Geometry. Prerequisite: Math 111-112. Three lecture and laboratory periods each week.

**311. History and Philosophy of Industrial Education.** (3) History and development of Industrial Education; social and economic reasons for present educational movements; types of modern industrial schools and courses; apprenticeship system and training of workers in modern industry. Three lecture periods each week.

**321-2-3. Part-Time Program in Cooperative Industrial Training.** (9) Principles of organizing and promoting such programs, selecting materials for related subjects, teaching, and carrying on supervised study and coordination. Three lecture periods each week.

**331. Shop Organization and Management.** (3) Securing equipment, making inventories and arranging for proper storage of materials, supplies and tools. Typical shop layouts, arrangements for tool rooms, stock rooms and storage facilities; keeping records and accounts. Personnel management of students and the organization of students' participation in shop management and safety. Three lecture periods each week.

**332. Instructional Aids.** (3) Designed to motivate and teach industrial education students to use, design and construct teaching aids for industrial classrooms and shops. Students are usually required to construct three-dimensional teaching aids. Three lecture periods each week.

**333. Materials and Methods for Shops and Related Subjects Teachers.** (3) Detailed study, combined with actual operation of each of the several standard types of projects, lesson planning for teaching specific units involving audio-visual; maintenance, and repair of projection equipment. The design and construction of static and dynamic models, selected for use in specific teaching units. Three lecture periods each week.

**371. Methods of Teaching Industrial Education.** (3) Lesson planning, techniques of the demonstration, plans for related instruction and methods of testing studied. Three lectures, two laboratory periods per week. Prerequisite: Admittance to the Teacher Education Program.

**374. Industrial Internship.** (12) A summer cooperative venture between the University and industrial enterprises which provides actual on-the-job experiences for printing and building construction majors in the department. All these students are required to take Industrial Internship at the end of their sophomore and junior years. The Head of the Department of Industrial Education must approve all internships before students are permitted to enroll. Internship may be conducted in a commercial establishment or at Tennessee State University. Efforts will be made to arrange with contracting agencies who cooperate in the Industrial Internship program to assist in financing subsistence needs of students. However, a student enrolled in Vocational-Industrial Education should arrange to finance himself during his internship. Forty laboratory hours each week.

**400. Driver Education and Traffic Safety.** (3) Designed to teach the beginning driver to drive according to standards of the American Automobile Association. Six lecture and laboratory periods.

**410. Teaching Methods in Driver Education and Traffic Safety.** (3) Designed to prepare teachers, administrators, and supervisors of driver education. It involves practice in both class-room and behind-the-wheel phases of the program. Prerequisite: (Open only to licensed experienced drivers approved by the Instructor) Six lecture and laboratory periods.

**411. Foremanship Training by the Conference Method.** (3) A study of the use of the conference as an instructional device; special methods, techniques, and procedures to be used in foreman training; duties and responsibilities of the typical industrial foreman. How to follow up foreman conferences by means of foreman's clubs and plant educational programs. Three lecture periods each week.

**412-13. Job Analysis.** (6) The principles of job analysis for the purpose of listing teaching content in trade and industrial education. Practice in analyzing trade jobs for production, auxiliary and related technical content; instructional difficulties and progression factors. Three lecture periods each week.

**431-32. Curriculum Building in Trade and Industrial Subjects.** (6) Arranging course material in trade subjects; following up results of job analysis; preparing check sheets and individual job sheets in both trade and related subjects. Prerequisite: IE 412. Three lecture periods each week.

**435-36-37. Problems in Trade and Industrial Teaching.** (9) Individual or group work on assigned or chosen problems involving the preparation, use and evaluation of instructional material for use in vocational industrial classes. Research involving the compilation and study of student records, employment placement, job progress, earnings, wage scale and similar items may also be carried out. Three lecture periods each week.

**450. Senior Project.** (3) Each senior is required to select and execute a project under supervision of his major advisor. It may involve the designing and making of the project complete with drawings, pictures, specifications and detailed data involved in its construction; or a research and compilation of a subject within the field of the student's interest. Three lecture periods each week.

**472. Student Teaching.** (12) Provides an opportunity for each prospective industrial education teacher enrolled at this institution to engage in the actual observation and teaching of industrial education classes in the secondary schools in this state. Student teacher schedules should be arranged to enable the student to devote full time to student teaching during the quarter in which the course is to be completed. Required for all students who are following the professional education core that leads to teaching as a career. Prerequisites: Ed. 201, Psy. 242-243, Ed. 301, Psy. 312, Ed. 387 and 371, the department's specific methods course. Forty laboratory hours each week.

**475. Summer Industrial Internship.** (12) A continuation of IE 374. Forty laboratory hours each week.

## **INDUSTRIAL ARTS**

**101. Drawing.** (3) Instruction in the use of drafting tools, sketching in industrial design; orthographic, isometric, oblique and cabinet drawing as applied to industrial products. Six lecture and laboratory periods each week.

**102. Drawing.** (3) Methods and systems and construction; their application in the design and erection of residences, and commercial structures; architectural detailing. Six lecture and laboratory periods each week.

**103. Drawing.** (3) Continuation of IA 102. Six lecture and laboratory periods each week.

**111. Woodworking.** (3) An introduction to the tools, materials, processes, and personnel of the Woodworking Industry, how they were developed, and how they are related to our present-day society. Three lecture periods each week.

**121. General Metalworking.** (3) An introduction to the tools, materials, processes and personnel of the Metalworking Industry. How they were developed, and how they are related to our present-day society. Three lecture periods each week.

**131. Electricity.** (3) An introduction to the tools, materials, processes and personnel of the Electronics Industry, how they were developed, and how they are related to our present-day society. Three lecture and laboratory periods.

**141. Printing.** (3) An introduction to the tools, materials, processes, and personnel of the Printing Industry, how they developed, and how they are related to our present-day society. Three lecture periods each week.

**142. Platen Presswork.** (3) Skills are developed in the care and maintenance, register, make-ready and feeding of the platen presses. Prerequisite: IA 141. Six lecture and laboratory periods each week.

**143. Make-up and Imposition.** (3) Emphasis on the development of skill in the make-up and imposition of book forms, newspapers, pamphlets, brochures and broadsides. Six lecture and laboratory periods each week. Prerequisite: IA 141.

**151. General Crafts.** (3) An introduction to the tools, materials, processes and personnel of the General Crafts Industry, how they were developed, and how they are related to our present-day society. Three lecture and laboratory periods each week.

**301. General Shop.** (3) For Industrial Arts students only. General concepts, organization, and administration of the general shop. Instruction is offered in woods, metals, ceramics, plastics, leather, general electricity and household mechanics. Six lecture and laboratory periods each week.

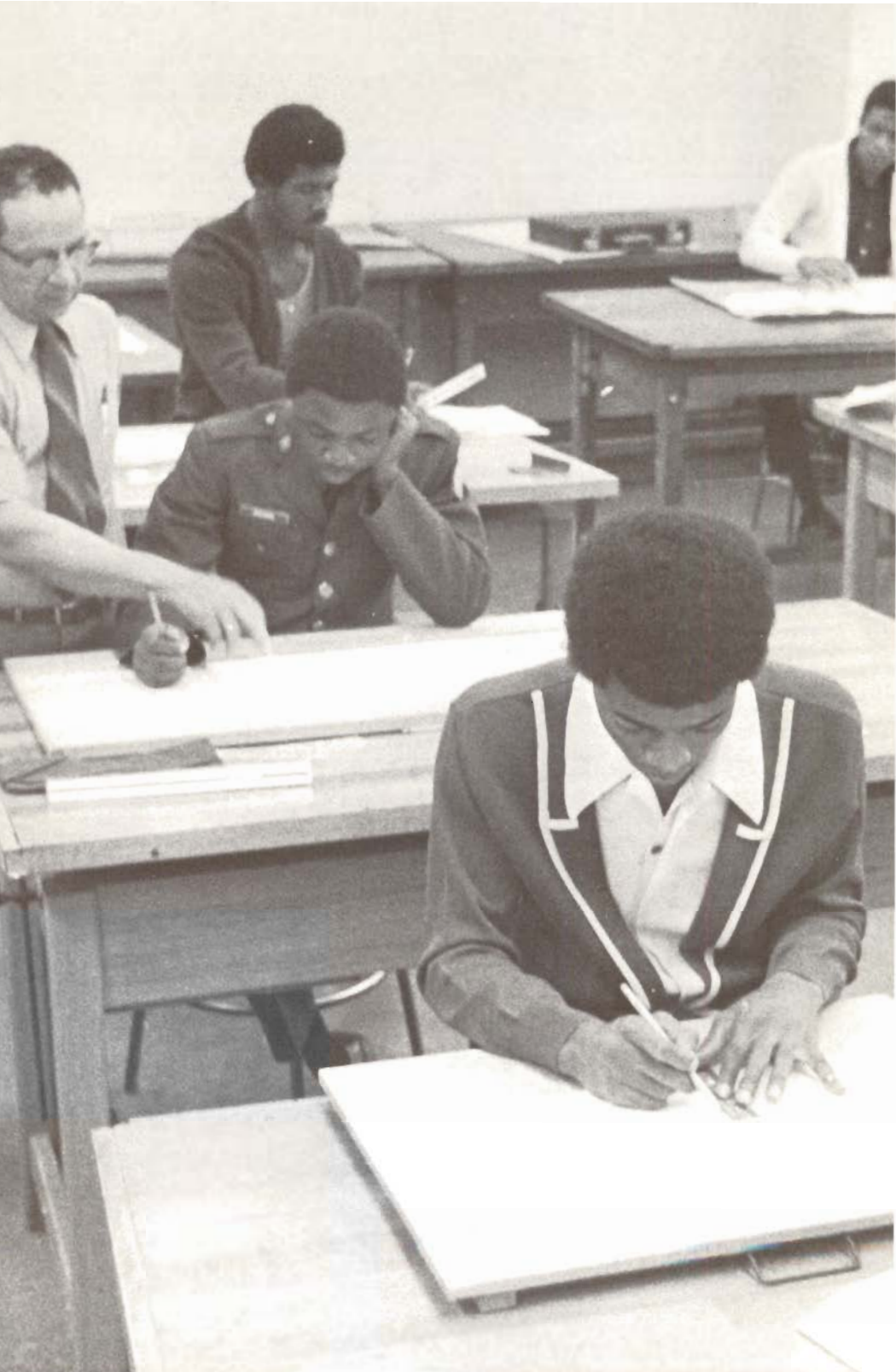
**311. Plumbing.** (3) The study of Plumbing Tools: their use and application in relation to industrial arts activities. Six lecture and laboratory periods each week.

**312. Machine Woodworking.** (3) Emphasis is placed upon the proper maintenance and operation of such power woodworking machines as circular saws, shapes, morticers, band-saws, surfacers and jointers. Simple projects are constructed that involve the uses of these machines. Six lecture and laboratory periods each week. Prerequisite: IA 111.

**313. Design of Wood Projects.** (3) Fundamentals, skills, and processes in designing and constructing wood projects as commonly used in secondary schools. Six lecture and laboratory periods each week.

**322. Art Metal.** (3) An introduction to Art and Jewelry making. Tapping, chasing and designing, shaping metal foil, sinking and beating down a tray, raising a bowl, decorating the





surface or edge, etching design, doing wire work, hand soldering a joint, polishing, coloring and preserving, metal spinning. Planning, designing and making projects, and developing subject matter as taught on the junior and senior high levels. Six lecture and laboratory periods each week. Prerequisite: IA 121.

**323. Sheetmetal Working.** (3) Introduction to sheetmetal working. Developing patterns, laying-out, cutting, bending, framing, forming, making seams, wiring edges, turning a burr, crimping, riveting, spot welding and soldering sheet metal. Planning and making projects, and developing subject matters as taught in the junior and senior high levels. Six lecture and laboratory periods each week. Prerequisite: IA 121.

**332. Basic Electronics I.** (3) Exploratory course developed to familiarize the student with basic electronic principles and acceptable practices in the utilization of electronic devices used in our present-day highly mechanized pushbutton society. This course is a logically organized series of presentations of basic electronic principles designed to stimulate interest and motivate further study in this fast growing area. Prerequisite: IA 131. Three lecture and laboratory periods each week.

**333. Basic Electronics II.** (3) Designed to reinforce knowledge with functional and factual information involved in the design and characteristics of present-day electronic devices. Includes a study of transmitting and receiving devices and many other electronically operated electro-mechanical innovations. Three lecture and laboratory periods each week. Prerequisite: IA 332.

**352. Woods and Plastics.** (3) An application of the fundamental principles of design and construction of wood and plastic projects as used on the secondary level. Six lecture and laboratory periods each week.

**353. Leather Crafts.** (3) An application of the principles of design and construction of leather projects. Six lecture and laboratory periods each week.

**362. Power and Transportation.** (3) History of power and transportation. Horse drawn vehicles. Internal combustion engines, Marine Transportation and Aeronautics. Three lecture and laboratory periods each week.

**363. Power and Transportation.** (3) Continuation of Power and Transportation 362. Using skillfully common hand tools and machine tools that are used by motor mechanics. Design and construction of Marine and Aircraft models. Assist in maintenance of various types of machines and engines. Six lecture and laboratory periods each week.

**411. Cabinet Making.** (3) Fundamentals, skills, and processes in the designing and construction of cabinets. Six lecture and laboratory periods each week.

**412. Furniture Construction.** (3) Problems in designing and selecting materials and making out bills of material for furniture construction. Six lecture and laboratory periods each week.

**413. Upholstery.** (3) Fundamentals, skills, and processes in repairing and upholstering furniture. Six lecture and laboratory periods each week.

**421. Fundamentals of Machine Shop.** (3) Fundamentals of shop mathematics, tool identification, proper methods and uses, tool classification, rules and scales. Six lecture and laboratory periods each week. Prerequisite: IA 121.

**422. Lathe Turning.** (3) Lathe nomenclature, chucking, micrometer reading, simple turning, roughing, polishing. Lathe set-up, jigs and fixtures. Six lecture and laboratory periods each week. Prerequisite: IA 121.

**423. Welding and Heat Treating.** (3) An introduction to arc and acetylene welding. Fundamental foundry practices and heat treatment of metals. Six lecture and laboratory periods each week.

**431-32. Television Theory and Practice.** (6) A study of the design, operation, repair, testing and alignment of TV receivers. Prerequisite: IA 131. Six lecture and laboratory periods each week.

**433. Radio Transmitters and Communications Procedure.** (3) Transmitter design and operation: F.C.C. laws and procedures. Prerequisite: IA 431-32. Six lecture and laboratory periods each week.

**451. Metal Crafts.** (3) An application and design of metal projects. Six lecture and laboratory periods each week.

**452. Ceramic Crafts.** (3) An application of the principles of design and construction of ceramic crafts. Six lecture and laboratory periods each week.

**453. Industrial Arts Design.** (3) An application of the fundamental principles of design and construction of all types of school shop projects. Three lecture and laboratory periods each week.

## **Aeronautics**

**101. Aerospace Basic Science.** (3) Covers those subjects that are essential for aircraft and aerospace technology. This course covers the physical properties of air, airfoil design and characteristics, aerospace standards and materials. This course includes basic information on truss structures, composite structures and sheetmetal fabrication as used in aerospace vehicles; including the fundamentals of aircraft electrical, and ignition systems. Three lecture and laboratory periods.

**102. Elementary Engines.** (3) Chemistry of combustion. Two and four stroke cycle engine design. Basic engine parts including their mechanical functions and requirements. Carburetion and fuel induction system design, magneto and ignition system design and operation; engine firing orders and ignition timing. Heat transfers, cooling and lubrication. Three lecture and laboratory demonstration periods.

**103. Elementary Aircraft.** (3) Aircraft structural designs and requirements. Welded steel tubing, aluminum alloy, fuselage and wing structures; dope and fabric covering. Aircraft system control mechanism design. Fabrication procedures for metal and composite structures. Three lecture and laboratory demonstration periods.

**111. Model Building.** (3) Deals with the structure and design for various model assemblies. Six laboratory periods.

**112. Aircraft Familiarization.** (3) Designed to acquaint the student with the operation, parts, assembly, and routine inspection of light aircraft. Three lecture and laboratory periods.

**113. Implications of Aviation.** (3) Deals with the social, geographic, economic and political implications of the air age.

**201. Advanced Engines.** (3) Disassembling, cleaning and visual inspection procedure. Maintenance and inspection requirements of ignition and fuel induction systems. Maintenance techniques for valve actuating mechanism. Inspection, installation and tracking of fixed pitch wood propellers. Power calculations, Engine run-up operation and pre-flight checks. Prerequisites: Aero 101-2. Six lecture and laboratory periods.

**202. Advanced Aircraft.** (3) Classification of repairs and alteration. Practical application of aircraft welding. Repair method for tubular steel, fabricated sheet metal and wood structures. Requirements of aircraft dopes, protective coatings and refinishing materials. Spray painting. Fabrication of transparent plastic materials. Prerequisites: Aero 101-103. Six lecture and laboratory periods.

**203. Engine Overhaul.** (3) Engine removal and handling safety precautions. Dimensional inspection of engine parts; magnetic particle inspection of steel parts fluorescent penetrant and x-ray inspection of non-ferrous metal parts. Cylinder and crankcase assembly and final run-up and pre-flight check. Prerequisite: Aero 201. Six lecture and laboratory periods.

**301. Airframe Overhaul.** (3) Aircraft disassembly, repairs, alterations, recovering and refinishing. Aircraft system inspection, repair, and modification. Civil Air Regulations concerning aircraft repairs, alteration and modification. Compliance and airworthiness directives. Making and reading drawing of repairs, alterations and modifications. Finding center of gravity location by weighing aircraft and by computation methods. Inspection and overhaul of aircraft electrical systems, control surfaces, and control mechanisms, methods of splicing control cable, wood spars, and cap strips. Airplane assembly and final inspection for flight tests. Prerequisite: Aero 202. Six lecture and laboratory periods.

**302. Aircraft Engine Accessory Overhaul.** (3) Inspection and overhaul of float type carburetors, magnetos, and battery ignition distributors, starting motors, generators, voltage-current regulators, vacuum pumps and hydraulic pumps. Service adjustment requirements of pressure injection type carburetors. Servicing lead-acid type aircraft batteries and auxiliary power units. Operation of machine tools and test equipment required in the overhauling of aircraft engine accessories. Installation and final inspection of accessories. Civil Air Regulations concerning accessory airworthiness. Prerequisite: Aero 101. Six lecture and laboratory periods.

**303. Propeller Fundamentals and Thrust Conversion.** (3) Inspection servicing and making minor repairs of fixed pitch metal propellers, two-position propellers, McCauley controllable and constant speed propellers. Hartzelle and Beech controllable pitch propellers, Aero Product Aeromatic propellers, Hamilton standard hydramatic propellers and Curtis electric propellers. Civil Air Regulations concerning repairs and overhaul of aircraft propellers. Overhaul and maintenance of propellers, governors and control devices. Principles of Jet Propulsion and Gas Turbine Engine. Prerequisite: Aero 101-2. Six lecture and laboratory periods.



**311. Communications.** (3) The development of methods of communication, radio navigation, morse code, etc. Lecture and laboratory periods. (Soph. & Jr. Level).

**312. Civil Air Regulations.** (3) Federal, state, and local safety regulations with its application to aviation. Lecture and laboratory periods. (Soph. & Jr. Level).

**313. Meteorology.** (3) General effects of weather phenomena. Special study of its relation to aviation. Lecture and laboratory periods. (Soph. & Jr. Level).

**321. Theory of Flight and Engine.** (3) The laws of nature as applied to aviation; also the principles, familiarization and operation of internal combustion and jet engines. Lecture and laboratory periods.

**322. Aerial Navigation.** (3) The principles involved in scientifically going from one place to another by means of air travel. Practical experience is offered in this course.

**323. Elementary Flight.** (3) How to fly with actual flight experience and instruction. Ten clock hours of dual flight instruction. One lecture and two laboratory periods.

**401. Airframe Maintenance.** (3) Repair and maintenance of fabric covered composite, tubular steel and sheet metal structures. Servicing and replacements of tires, wheels, and brakes. Repair and adjustment of aircraft electrical systems and control units. Maintenance of landing gear mechanism, hydraulic systems and essential units. Trouble shooting on live aircraft malfunction conditions. Civil Air Regulations concerning airframe repairs. Prerequisite: Aero. 301. Six lecture and laboratory periods.

**402. Power Plant Maintenance.** (3) General engine maintenance, malfunction problems on live engines. Repair and maintenance of carburetors, ignition systems, spark plugs, magnetos and battery ignition distributors, valve and valve operating mechanism, cylinder assemblies, baffles; cowl and cooling systems. Engine mount structures and dynamic suspension maintenance and repairs. Adjusting fuel, oil and vacuum pressure regulator. Oil pump and lubrication system repairs. Field servicing aircraft propellers. Prerequisite: Aero. 203. Six lecture and laboratory periods.

**403. Avionics.** (3) Basic design and functional operation of electrical and electronic devices used in aircraft and aerospace vehicles. This course includes both factual and functional information on installation, operation, servicing, testing and acceptable maintenance procedures. FAA and FCC regulations in regards to installation and servicing of communication and navigational equipment. Installation, calibration and bench-check methods. Six lecture and laboratory periods. Prerequisite: Aero. 302.

**411. Advanced Flight.** (3) Supervised solo with dual flight instruction and experience. One lecture and two laboratory periods.

**412. Aerodynamics.** (3) A general course dealing with the properties of air flow, air foil characteristics, wing theory, parasitic drag, introduction of stability and control, and wind tunnel experiments.

**413. Aeronautics Workshop.** (3) Designed primarily for in-service teachers whose objectives are to enrich their curriculum by weaving air age materials into their specific subject area. Development of classroom procedures.

## **Building Construction**

**101. Fundamentals of Carpentry.** (3) Modern tools and portable machinery, materials and their uses. Carpentry specifications and modern house construction. Six lecture and laboratory periods.

**102. Foundation Construction.** (3) Beginning construction work. Staking and laying out foundation walls. Forms for footings, forms for foundation walls, and methods used in building forms. Prerequisite: BC 101. Six lecture and laboratory periods.

**103. Walls and Floor Framing.** (3) Types of wall framing, sill construction, girders and beams, joints, bridging, subflooring, outside walls, partition walls, framing, rough openings, second floor joists and wall sheathing. Six lecture and laboratory periods.

**212. Masonry Construction.** (3) This course deals with the use and care of tools; common materials and methods used in bricklaying; mortar making and spreading; laying straight walls using standard bonds; concrete footings, walls, piers, plain and reinforced mortars; laying out foundations, and excavating. Six lecture and laboratory periods.

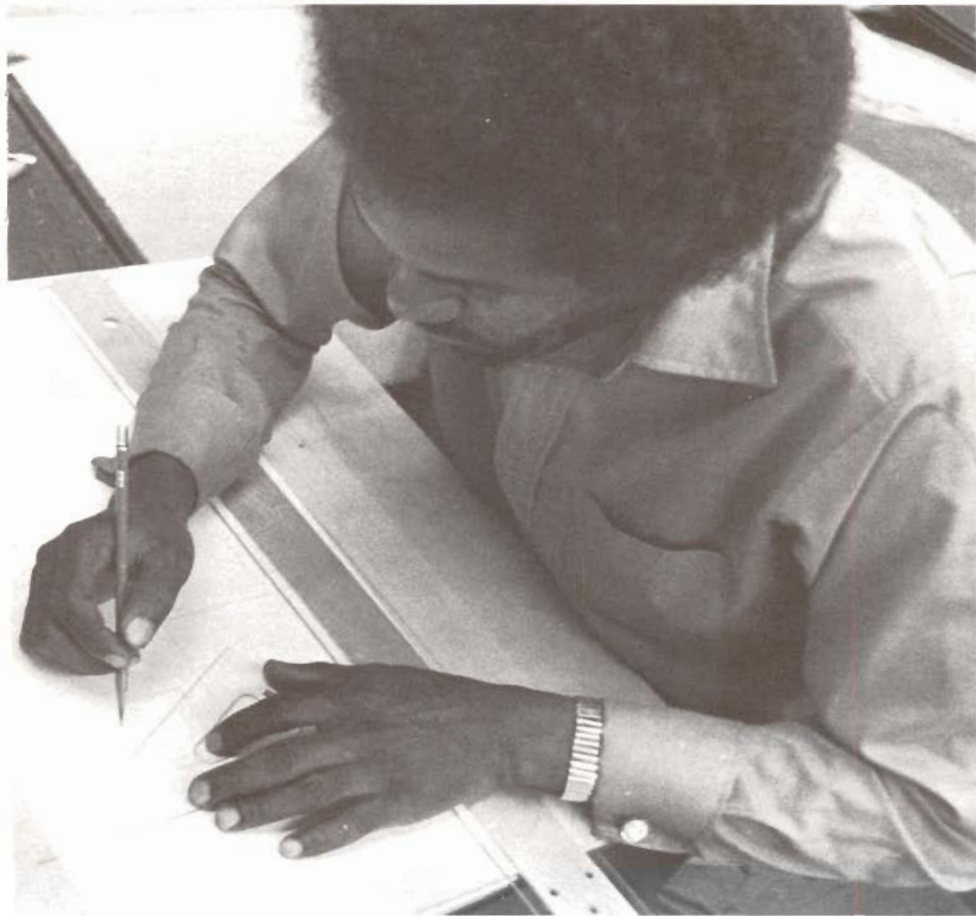
**213. Masonry Construction.** (3) Practice is given in building walls using various structural bonds; running veneer wall against block and frame backings; building construction work to include openings, arches, windows, doors, flues and vents. Six lecture and laboratory periods.

**214. Masonry Construction.** (3) Practice is given in advance brick and concrete work; laying fire brick; fireplace work; stone cutting and setting tile. Six lecture and laboratory periods.



**221. Construction Drawing.** (3) Study of modern house and small commercial buildings. Construction methods, application and use of present-day building materials through analysis and drawing; free-hand drawing, details of carpentry and masonry construction, structural designing. Six lecture and laboratory periods.

**222. Construction Drawing.** (3) Continuation of Construction Drawing 221. Six lecture and laboratory periods.



**223. Construction Drawing.** (3) Specification and estimating; reading and interpreting blueprints, making complete sets of drawings; writing specifications and figuring costs. Six lecture and laboratory periods.

**302. Residential Wiring.** (3) Practice in house wiring; calculating and determining the size of service and circuits; wiring symbols; methods and procedures of wiring; installation of electrical equipment and devices. Prerequisite: IA 131. Six lecture and laboratory periods.

**303. Residential Wiring.** (3) This course is a continuation of 302. Six lecture and laboratory periods.

**332. Concrete Construction.** (3) Instruction in kinds of concrete, design of footings, foundation and reinforcement, types of insulation and waterproofing. Six lecture and laboratory periods.

**401. Fundamentals of Plastering.** (3) The study of common materials; care and use of tools. Mixtures and application. Prerequisite: BC 212. Six lecture and laboratory periods.

**402. Fundamental Concrete Work, Cement, Finishing.** (3) The study of materials, care and use of tools. Application of concrete mixture, form building. Construction of foundation walls, walks and floors. Prerequisite: BC 212. Six lecture and laboratory periods.

**403. Advanced Masonry Construction.** (6) Practical application of materials and methods covered in the previous masonry courses. Twelve lecture and laboratory periods.

**411. Mechanical Equipment of Building.** (3) Fundamentals of plumbing and heating; installation of controls on gas, water, and steam system; layout for plumbing, heating and ventilation; fixtures. Six lecture and laboratory periods.

**412. Estimating.** (3) Practical examples in estimating costs of buildings; labor and materials. Six lecture and laboratory periods.

**413. Painting and Finishing.** (3) Blending and matching colors and pigments, interior and exterior house painting. Six lecture and laboratory periods.

**421. Roof Framing.** (3) Styles of roofs: gable roof, hip roof, gambrel roof. Principles of roof framing. The ridge common rafter. Hip rafter, layout of overhang and tail cut, valley rafter, jack rafter, dormer roof. Prerequisite: 101. Six lecture and laboratory periods.

**422. Exterior Finish.** (3) Covering for roof and wall, simple, open and box cornice, gable trim, planing door and window frames, water table, corner boards. Porch cornice, bay window trim and exterior wall covering. Prerequisite: BC 401. Six lecture and laboratory periods.

**423. Interior Finish and Millwork.** (3) Interior wall covering, interior trim, types of casings and base laying, finished floor fitting and hanging doors. Mortise locks, stair construction, installing cabinets, built-in kitchen units and interior molding. Prerequisite: BC 402. Six lecture and laboratory periods.

**431. Industrial Wiring.** (3) Methods and procedures, equipment and materials peculiar to commercial buildings. Design and installation of wiring systems including circuitry for lighting, motors and other polyphase current equipment. Prerequisite: BC 303. Six lecture and laboratory periods.

**432. Industrial Wiring.** (3) This course is an extension of 431. Six lecture and laboratory periods.

**433. Lighting, Estimating, National Electrical Code.** (3) Elementary lighting theory, fixture selection and maintenance, theory and operation of fluorescent lights. Estimating materials. Rules and regulations as prescribed by the current National Electric Code. Prerequisite: BC 432. Six lecture and laboratory periods.

## **PRINTING**

**IA141. Printing.** (3) For course description see Industrial Arts curriculum.

**IA142. Platen Presswork.** (3) For course description see Industrial Arts curriculum.

**IA143. Make-up and Imposition.** (3) For course description see Industrial Arts curriculum.

**201. Linotype Keyboard Operation.** (3) Emphasis on correct keyboard fingering and everyday maintenance of the machine. Prerequisite: IA143. Six lecture and laboratory periods.

**202. Cylinder Presswork.** (3) Care, maintenance, make-ready, and operational skills developed. Prerequisite: IA141. Six lecture and laboratory periods.

**203. Cost Finding, Estimating and Bindery Operation.** (3) Copy fitting and estimating the cost of producing all types of printed matter. Standard sizes, weights and proper uses of cover, cards, book and bond papers are studied. The development of skills in the operation of the power cutter, folder, stitcher and perforator. Six lecture and laboratory periods.

**301. Advance Linotype Keyboard Operation.** (3) Further development of manipulative skills on the linotype keyboard and performance of second echelon maintenance. Prerequisite: 201. Six lecture and laboratory periods.

**302. Advanced Cylinder Presswork.** (3) Further development of technical know how in cylinder presswork. Prerequisite: Printing 202. Six lecture and laboratory periods.

**303. Offset Fundamentals.** (3) Principles and practices of the planographic printing process are studied also the copy camera, stripping, opaqueing, and other offset techniques are studied.

**401-2-3. Production.** (9) These courses are designed to round out the student's training by concentrated application of principles and techniques gained in previous courses in the area of hand compositions make-up and imposition. Linotype Keyboard Operation and machine principles, and platen and cylinder presswork. In these courses the student will be given every opportunity to develop skills in actual shop foremanship, management and supervision. Prerequisite: All preceding courses. A minimum of 12 hours per week in supervised laboratory experiences is required.



## DEPARTMENT OF AEROSPACE STUDIES

**WILLIAM H. THORPE**, Major, U. S. Air Force, Professor of Aerospace Studies  
Faculty:

### Officers:

Capt. Ernest Brice  
Capt. Walter E. Davis  
Capt. Ronnie C. Peoples

### Non-Commissioned Officers:

Staff Sergeant George L. Wooden  
Staff Sergeant Samuel R. Davis  
Staff Sergeant Martin L. Hood

## AIR FORCE RESERVE OFFICERS TRAINING CORPS PROGRAM

### Purpose of Air Force ROTC

The Air Force ROTC Program is designed to qualify for commissions those college men and women who desire to serve in the United States Air Force. The program provides education that will develop skills and attitudes vital to the professional Air Force officer. Upon graduation from the University and the Department of Air United States Air Force Reserve. Commissioned graduates will be required to serve at least five years active duty with the Air Force if they take flying or navigator training. Non-flying officers will be required to serve at least four years active duty. Opportunities exist throughout this period of active duty for the graduate to receive a Regular Commission in the Air Force and to pursue graduate studies through the Air Force Institute of Technology (AFIT), and commissioned service as a career.

### University Credits

The following credits are granted for Air Force Aerospace Studies work:

Aerospace Studies 100 series (Freshman)—3 quarter hours per year  
Aerospace Studies 200 series (Sophomore)—3 quarter hours per year  
Aerospace Studies 300 series (Junior)—9 quarter hours per year  
Aerospace Studies 400 series (Senior)—9 quarter hours per year

The Department of Aerospace Studies offers a minor consisting of 30 quarter hours including:

Six (6) quarter hours of general military course, 1 quarter hour each quarter during the freshman and sophomore years.

Twenty-four (24) quarter hours of 300 and 400 level courses during the junior and senior years as follows:

- a. Six (6) quarter hours of 300 and 400 level social science courses
- b. Eighteen (18) quarter hours of Aerospace courses, (Courses 351, 352, 353, 451, 452, 453). Departments may allow these courses as alternatives for elective credit and certain required courses. Departments which require unspecified minors may use the Aerospace program as a minor.

### Courses Available

The first two years (freshman and sophomore) of the Air Force Curriculum are known as the General Military Course. The last two years of the curriculum (junior and senior) are known as the Professional Officer Course.

Fight training, which includes ground instruction and thirty-five hours of flight instruction, is offered free of charge to qualified pilot applicants who are senior ROTC cadets. The cadet receives a Federal Aviation Agency private pilot's license on successful completion of the Flight Instruction Program.

### Eligibility for the Professional Officer Course

(Junior and Senior Years)

All cadets enrolled in the Professional Officer Course (junior and senior years) of the Air Force ROTC must:

- a. Have either completed the General Military Course (freshman and sophomore years), or the off-campus six weeks Field Training Course, or have the required amount of prior military service.



- b. Have two academic years of college remaining (either graduate or undergraduate).
- c. Have achieved an Officer Quality percentile or 25 or higher on the Air Force Officer Qualification Test (AFOQT).
- d. Execute a written agreement with the Government to complete the program, contingent upon remaining in school; and to attend the off-campus Four Week Field Training program at the time specified and to accept an Air Force Reserve Commission, if tendered.
- e. Be selected by the Professor of Aerospace Studies and the President of the University or his duly authorized representative.
- f. Meet certain specified age requirements.

## **Benefits**

### **a. General**

All cadets enrolled in AFROTC are furnished texts and uniforms by the Government through the Military Property Custodian, Tennessee State University. Enrollees are required to deposit \$10.00 as surety to the University against loss or damage of uniforms or equipment. At the completion of AFROTC, or when the student withdraws from the University, the deposit is returned to the student provided he obtains a proper clearance for uniforms and equipment. Professional Officer Course cadet receive a subsistence allowance of \$50.00 per month, in addition they are paid mileage to and from Field Training, plus a stipend based on current active duty pay scales. A four week Field Training Course is normally required between the sophomore and junior years.

### **b. Scholarship Program**

Four-year cadets are eligible to compete for a limited number of full-tuition scholarships and \$75.00 per school year for books, and a retainer fee of \$50.00 per month. Selection will depend mainly on three factors: Score on the Air Force Officer Qualifying Test; past academic performance; and the assessment of a scholarship review board. These are given approximately equal weight.

## **Draft Deferment**

Participation in the AFROTC program permits deferment from the draft under the Universal Military Training and Service Act. All freshmen and sophomores who show a valid need and are tentatively identified for acceptance in the Professional Officers Course and all Professional Officers Course cadets may be deferred. For further information on the subject of deferment, students should consult the Department of Aerospace Studies and the Dean of Admissions and Records.

## **Flight Instruction Program**

The objectives of the Flight Instruction Program are: to motivate qualified Air Force ROTC cadets toward a career in the Air Force; to encourage qualified basic Air Force ROTC cadets to enroll in the Professional Officer Course as pilot training applicants; and to provide a screening device that will identify those pilot training applicants who lack the basic aptitudes for Air Force pilot training.

**General Descriptions:** The FIP provides 36½ hours flying time—35 hours (15 hours solo and 20 hours dual) of flight instruction plus 1½ hours final progress check. The FIP also provides 30 hours of ground school. Each graduate of the FIP who successfully completes 35 hours of flight and ground instruction is eligible to apply for an FAA Private Pilot's Certificate.

**SIX-WEEKS FIELD TRAINING COURSE.** This course is designed to prepare the student for enrollment into the Professional Officer Course (AS 300 and AS 400). It enables transfer students and others who are unable to take the two-year General Military Course an opportunity to pursue the Advanced Program and thereby receive a commission in two years of study leading to the Baccalaureate degree at the University. The training is provided at a designated Air Force base.

**FOUR-WEEKS FIELD TRAINING COURSE.** This course is designed to further prepare the four year cadet for enrollment into the Professional Officer Course (AS 300 and AS 400). This training is provided at a designated Air Force base and is the

cadet's first extended exposure to an Air Force environment. The course includes cadet orientation, survival training, junior officer training, aircraft and aircrew indoctrination, physical training, organization and function of an Air Force base, career orientation, small arms familiarization, first aid, and other supplemental training.

### **Sponsored Activities**

The Department of Aerospace Studies sponsors the following activities:

1. **The AFROTC Drill Team.** The "Tiger Jet" is the official name of the AFROTC Drill Team. This team is composed of approximately thirty-five outstanding cadets who possess desirable leadership potential. This team performs at athletic events, both home and away, at parades or ceremonies.
2. **The Arnold Air Society.** A national AFROTC Society for outstanding cadets.
3. **The Honor Guard.** Outstanding General Military Course cadets who perform selected duties for the University.
4. **NCO Academy.** An organization of selected cadets whose aim is to develop leadership potential through proficiency in drill and ceremonies.
5. **Angel Flight.** A national auxiliary of the Arnold Air Society. It is composed of selected coeds who are interested in enhancing esprit, morale and appearance of the Air Force ROTC Cadet Corps.

### **Curriculum**

The Department offers a minor consisting of 30 quarter hours including:

Six (6) quarter hours of basic courses, 1 quarter hour each quarter during the freshman and sophomore years.

Twenty-four (24) quarter hours of 300 and 400 level courses during the junior and senior years as follows:

- a. Six (6) quarter hours of 300 and 400 level social science courses.
- b. Eighteen (18) quarter hours of Aerospace courses, courses 351( 352, 353, 451, 452, 453. Some departments may allow these courses as alternatives for elective and certain required courses. Departments which require unspecified minors may use the Aerospace programs as a minor.

The Aerospace Studies' program is voluntary. It has a number of advantages for all students. Those students interested, are encouraged to discuss the program with their major advisors and the Department of Aerospace Studies.

### **COURSES IN AEROSPACE STUDIES**

**151, 152, 153. United States Military Forces in the Contemporary World.** (3) Freshman year. An introductory course concerning the history and doctrine of the United States Air Force to include its mission and organization. Includes a study of United States strategic offensive and defensive forces and their roles in supporting security throughout the free world. The course also includes a study of United States general purpose and aerospace support forces within the military complex.

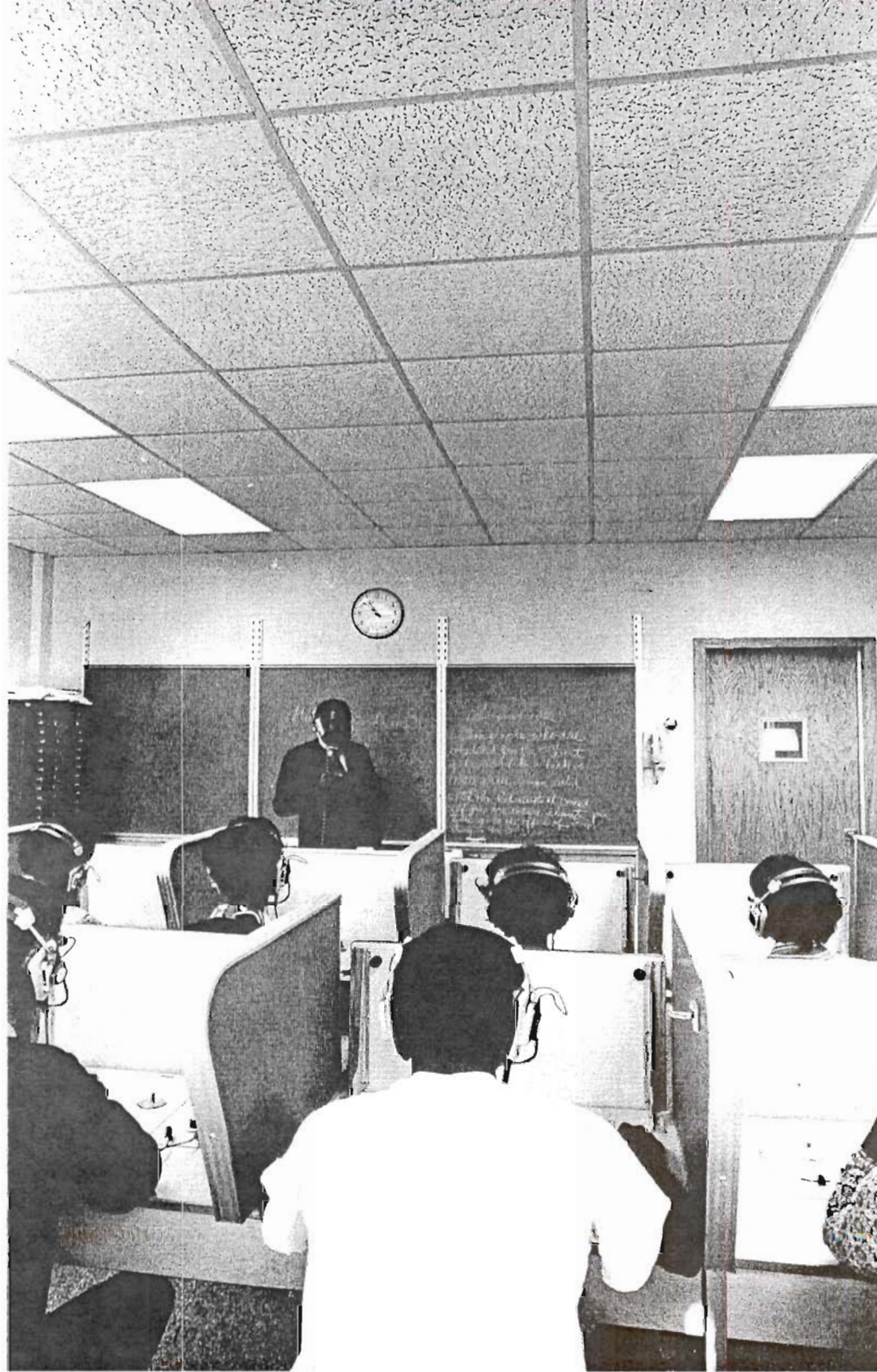
**251, 252, 253. United States Forces in the Contemporary World** (3) Sophomore year. The study of Defense Policy, a relatively new interdisciplinary subject area. Among its components are Military Strategy, Foreign Policy, Economic Analysis, and History. The Readings and organization of this course reflect the dual existence of international politics and domestic politics, which both contribute to the formation and execution of defense policy.

**351, 352, 353. Growth and Development of Aerospace Power.** (9) Junior year. These courses are designed to improve the ability to speak and write with accuracy, clarity and dignity of style and provide an introduction to the course of military conflict; the development of Aerospace Power in the United States; mission and organization of the Defense Department; Air Force concepts, doctrine and employment. Include the United States operation in space for commercial and military uses.

**451, 452, 453. The Professional Officer.** (9) Senior year. These courses are designed to further develop the student's managerial and leadership abilities with emphasis on group discussions, lectures, short papers, and human relations. Includes the meaning of professionalism, professional responsibilities, the military justice system, leadership, theory, functions and practices; management principles and functions; problem solving; and management tools, practices and controls.









## THE GRADUATE SCHOOL

Graduate studies leading to the Master's degree at Tennessee State University by the General Assembly in 1941, and programs in teacher-education were initiated during the following year. Sometime later the Graduate School was established, and several other graduate offerings were added technical branched and in the liberal arts.

At present, the following masters degrees and major fields are offered:

### Master of Arts

Biology	Music
French	Spanish
History	Speech and Drama

### Master of Arts in Education

Administration and Supervision  
Agricultural Education  
Business Education  
Elementary Education  
Health and Physical Education  
Home Economics Education  
Music Education  
Psychology (Educational)  
Science Education  
Secondary School Instruction

### Master of Science

Animal Science	Plant Science
Biology	Psychology (General)
Chemistry	Psychological Services (School)
History	Speech and Drama
Guidance and Counseling	Zoology

Requirements for these programs are described in the current Graduate School Bulletin.

Further information may be obtained by writing to:

The Dean of the Graduate School  
Tennessee State University  
3500 Centennial Boulevard  
Nashville, Tennessee 37203

All applications and transcripts should be mailed also to the above address.





**UNIVERSITY  
PERSONNEL**



## UNIVERSITY PERSONNEL

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- Donald Corbett, B.S., Lincoln University; M.S., University of Illinois. Assistant Professor of Health, Physical Education and Recreation. Assistant Basketball Coach, Grade II.**
- Hazel M. Cothran, B.S., Middle Tennessee State College; M.A., Memphis State University. Instructor of English.**
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- Robert H. Countess, B.A., M.A., Bob Jones University; M.A., University of Georgia; Ph.D., Bob Jones University. Assistant Professor of Philosophy.**
- William D. Cox, II, B.S., M.A., Tenn. A. and I. State College. Associate Professor of Speech and Drama.**
- June M. Crawford, B.A., Southern University; M.A., Ed.S., George Peabody College for Teachers. Instructor in English.**
- Hubert B. Crouch, B.A., Texas College; M.S., Ph.D., Iowa State College. Professor of Biology and Dean of the Graduate School.**
- Cecile E. Crump, B.S., Langston University; M.A., Northwestern University; Ed.D., Indiana University. Professor and Head of the Department of Business Education.**

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**Edward N. Cullum, B.A., David Lipscomb College; M.A., Ed.D., Peabody College. Associate Professor of History.**

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**Walter E. Davis, B.S., North Carolina State University, M.S., Air Force Institute of Technology., Captain, USAF, Assistant Professor of Aerospace Studies.**

**L. Linton Deck, Jr., B.S., Davidson College; M.A., Peabody College; Ed.D. Harvard University. Part-Time Associate Professor of Education.**

**James Dennis, Sr., B.A., George Poppordine; M.A., Tennessee State University; Ph.D., George Peabody College. Assistant Professor of History.**

**Martin O. Deschênes, B.A., University of Montreal; M.A., Rivier College; M.A., Vanderbilt University (Residence requirements completed for Ph.D.) Assistant Professor of French.**

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**Ora W. Eads, Jr., B.S., M.A., Appalachian State University. Assistant Professor of History.**

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**Vivian J. Fielder, B.S., Tougaloo College; M.S., University of Illinois. Instructor in Mathematics.**

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**Geraldine B. Fort, B.S., Tenn. A. and I. State College; M.A., Columbia University. Associate Professor and Coordinator of Curriculum in Clothing and Textiles.**

**Arthur E. Franklin, A.B., Tougaloo College; M.S., Indiana University. Assistant Professor of Education.**

**Luther B. Franklin, B.S., Tougaloo College; M.S., Tenn. A. and I. State University. Assistant Professor of Foods and Nutrition.**



- Sandra M. Franklin, B.A., M.A., Memphis State University. Instructor in History.**
- M. Geraldine Gage, B.S., Drexel Institute of Technology; M.A. Columbia University; Ph.D., Cornell University. Professor of Home Economics.**
- David C. Gandy, B.S., Morehouse College; M.S., Atlanta University. Associate Professor of Chemistry.**
- Pearlie M. Gasaway, A.B., Lane College; M.A., Columbia University. Associate Professor of Mathematics.**
- Sadie C. Gasaway, B.S., LeMoyne College; M.A., University of Illinois; Ph.D., Cornell University. Professor and Head of the Department of Physics and Mathematics.**
- Carrie M. Gentry, B.S., Howard University; M.S., Tenn. A. and I. State University. Assistant Professor of Health, Physical Education and Recreation and Director of Intramural Sports for Women.**
- Howard C. Gentry, B.S., Florida A. and M. College; M.S., Ohio State University. Director of Athletics, Grade I, and Professor of Health, Physical Education and Recreation.**
- Joe W. Gilliam, B.S., West Virginia State College; M.A., University of Kentucky. Football Coach, Grade II, and Associate Professor of Health and Physical Education and Recreation.**
- Eddie T. Goins, A.B., Knoxville College; M.A., Teachers College, Columbia University; Ph.D., State University of Iowa. Professor of Music.**
- Martin J. Goldberg, B.S., American International College. Instructor in Accounting.**
- Ronald Goldman, A.B., Birmingham-Southern College; M.S., Ph.D., University of Pittsburgh. Part-time Instructor in Speech.**
- Hiram V. Gordon, B.S., M.S., Tenn. A. and I. State University. Instructor in Art Education.**
- Mattie L. Gordon, B.S., M.S., Tenn. A. and I. State College. Assistant Professor of Business Education.**
- Martin J. Gottlieb, B.A., Columbia College; M.A., University of Rochester. Instructor in French.**
- Howard W. Green, B.S., Lincoln University (Mo.); M.Ed., University of Pittsburgh. Director of P.E., Indiana University. Associate Professor of Health, Physical Education and Recreation.**
- Frank T. Greer, B.Mus., West Virginia State College; M.A., Marshall College. Professor of Instrumental Music, and Director of Bands.**
- \*Mary H. Greer, B.S., Winston-Salem Teachers College; M.S., Cornell University. Assistant Professor of Home Economics Education.**
- Angeline A. Gruneich, B.S.N., Jamestown College; M.N., University of Washington. Instructor in Nursing Education.**
- David A. Hamilton, B.S., M.S., Tenn. A. and I. State College; Ed.D., The Pennsylvania State University; Professor of Agricultural Education and Dean of the School of Agriculture and Home Economics.**
- \*Samuel J. Harper, A.B., Morehouse College; M.A., Atlanta University; Assistant Professor of English.**
- William V. Harper, B.S., South Carolina State College; M.S., Ed.S., Wayne University. Professor and Head of the Department of Industrial Education.**
- Dolores A. Harris, B.S., Tuskegee Institute; M.S., University of Wisconsin. Assistant Professor of Home Economics.**
- Ronald M. Harris, B.S., in Architectural Engineering, Kansas State College. Assistant Professor of Architectural Engineering.**
- Lonnie Haynes, B.S., M.S., Tenn. A. and I. State College; Ph.D., Adelphi University. Associate Professor and Head of the Department of Chemistry and Chairman of Graduate Studies in Chemistry.**
- \*Berry Hempstead, B.S., Arkansas A. M. & N. College; M.Ed., University of Arkansas. Assistant Professor of Science Education.**
- Michael J. Hensch, B.S.M.E., Santa Clara University; M.S.; Ph.D., Stanford University. Assistant Professor of Mechanical Engineering.**
- Ralph H. Hines, B.S., M.S., Ph.D., University of Illinois. Part-time Professor of Sociology.**
- Macon G. Hinton, B.S., in Civil Engineering, Howard University; M.S.E., in C.E., University of Michigan; Certificate in Water Resources, Princeton University. (Residence requirements completed for Ph.D.) P.E. Professor of Civil Engineering.**
- Richard A. Hogg, B.S., Tenn. A. and I. State University; M.A., University of South Dakota; Ph.D., Vanderbilt University. Associate Professor of Biology.**
- Lewis R. Holland, B.C.S., M.C.S., New York University. Professor and Head of the Department of Business Administration.**

\*On Leave

\*Deceased (in case of S. Harper)



- Newton S. Holiday, Jr., B.A., Fisk University; M.A., Columbia University. Part-time Assistant Professor of Art.**
- Robert N. Holzner, B.S., Bowling Green Business University; C.P.A. Assistant Professor of Business Administration, and Coordinator of Curriculum in Accounting.**
- Juanita E. Horner, B.S., Tenn. A. and I. State College; M.A., University of Michigan. Associate Professor of English.**
- Helen R. Houston, B.A., Bennett College; M.A., Scarritt College; M.A. Colorado State University. Assistant Professor of English.**
- Hayes Howard, B.S., Hampton Institute. (Residence requirements completed for M.S. degree in Public Administration and specialization in planning). Professor of Industrial Education. Director of Campus Landscaping.**
- Darlene H. Huddleston, B.A., Lane College; M.A., Teachers College, Columbia University, Ed.D., University of Tennessee. Associate Professor of Elementary Education.**
- Earline H. Hudson, A.B., Flora Stone Mather College; B.S. in L.S., M.S. in L.S., Western Reserve University. Assistant Professor of Library Service.**
- Robert J. Hudson, B.S., Tenn. A. and I. State College; M.A., Ph.D., New York University. Professor of English and Chairman of Upper Division, Department of English and Assistant to the Dean, School of Arts and Sciences.**
- Patricia G. Hull, B.S., M.S., Auburn University; Ph.D., Georgia Institute of Technology. Associate Professor of Physics.**
- Jacqueline Hunter, B.S., North Carolina College at Durham; M.S., Tennessee A. and I. State University. Instructor in Biology.**
- Mildred S. Hurley, B.S., South Carolina A. and M. College; M.S., Ed.D., Indiana University. Associate Professor of Elementary Education.**
- Charlie M. Hutchings, B.S., Clark College; M.S. Teachers College, Columbia University. Assistant Professor of Education.**
- Henry H. Hymes, B.A., Tenn. A. and I., State College; M.S., (Residence Requirements Completed for Ph.D.), Syracuse University. Associate Professor of Geography and Acting Head of the Department of Science Education.**
- Erna J. Jackson, B.S., M.A., Tenn. A. and I. State University. Assistant Professor of English.**
- Leon Q. Jackson, Registered Architect. B.S. in Architecture, Kansas State College; M.S., in Architecture, University of Oklahoma; P.E. Professor of Architectural Engineering.**
- Levada McGlorie Jackson, B.S., Tuskegee Institute; M.S.L.S., University of Oklahoma. Instructor in Library Science.**
- Mary L. Jackson, B.S., M.S., Tenn. A. and I. State College. Assistant Professor of Business Education.**
- Tillman V. Jackson, B.S., Knoxville College; M.Ed., Ed.D., University of Oklahoma. Professor of Education.**
- Pauline Marable James, B.S., M.S., Tenn. A. and I. State University; R.N., R.N.A., Meharry Medical College. Assistant Professor of Psychology.**
- \*Mary E. Johnson, A.B., Virginia State College; M.A., Michigan State University. Assistant Professor of French.**
- Rother R. Johnson, B.S., Virginia State College; M.S., Ph.D., Michigan State University. Professor of Biological Sciences and Chairman of Upper Division of Department of Biological Sciences.**
- Alma Dunn Jones, B.S., Tenn. A. and I. State College; M.A., Columbia University. Professor of English and Chairman of Freshman English and Composition.**
- Clinton E. Jones, B.S., North Carolina A. and T. College; M.S., University of Michigan. Professor of Applied Mathematics in Engineering and Director of Computer Center.**
- Hinton C. Jones, A.B., Morehouse College; M.A., Cornell University. Associate Professor of English.**
- Ronald A. Jones, B.E., M.S. in C.E., Vanderbilt University. Assistant Professor of Civil Engineering.**
- \*Theodore J. Jones, B.A., Xavier University; M.A., Michigan State University. Assistant Professor of Art.**
- Troy L. Jones, B.S., M.S., Tenn. A. and I. State University. Assistant Professor of Speech and Drama.**
- Prem S. Kahlon, B.S., Punjab University; M.S., Ph.D., Louisiana State University. Associate Professor of Biology.**

\* On Leave

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- Henry A. Kean, Jr., B.S., M.S., Tennessee A. and I. State University. **Instructor in Biology.**
- Raymond H. Kemp, B.A., M.S., Duquesne University. **Professor of Sociology.**
- Vivienne Killingsworth, B.A., University of Wales (Residence requirements completed for Ph.D.). **Instructor in History.**
- \*Luther Kindall, B.S., M.S., Tennessee A. and I. State University. **Instructor in Psychology.**
- Calvin E. King, A.B., Morehouse College; M.A., Atlanta University; Ph.D., Ohio State University. **Professor of Mathematics.**
- Phillip E. Kithcart, B.A., North Carolina Central University; M.A., University of Cincinnati. **Instructor in Geography.**
- Peter C. Lai, B.S., Chung Cheng University; M.S., Ph.D., Vanderbilt University. **Associate Professor of Mathematics.**
- Eva Bluford Landers, B.S., North Carolina A. & T. College; M.S., Temple University. **Instructor in Biology.**
- Lauree Griffin Lane, B.A., Fisk University; M.S., Indiana University. **Assistant Professor of Biology.**
- Harry E. Lash, B.S., North Carolina A. and T. College; M.S., Tenn. A. and I. State College. **Assistant Professor of Industrial Education and Engineering Drawing.**
- Nancy R. Ledet, A.B., M.S., Tennessee A. and I. State University. **Instructor in Mathematics.**
- Audrey E. Lewis, B.S., M.S., University of Illinois; Ed.D., George Peabody College for Teachers. **Associate Professor of Health and Physical Education.**
- Edward C. Lewis, B.Mus., West Virginia State College; Diploma, The Army Music School; M.S., University of Illinois; Ph.D., University of Wisconsin. **Professor and Head of the Department of Art and Music Education.**
- Gloria M. Lewis, B.S., M.S., Tennessee A. and I. State University. **Instructor in Psychology.**
- Crawford B. Lindsay, A.B., Talladega College; M.A., University of Michigan; Ph.D., Cornell University. **Professor and Head of the Department of English.**
- Shannon D. Little, B.S., LeMoyne College; B.S., M.S., Tenn. A. and I. State College. **Football Coach, Grade II, and Associate Professor of Health, Physical Education and Recreation.**
- Hortense D. Lloyd, A.B., Prairie View College; A.M., Columbia University. **Assistant Professor of English.**
- R. Grann Lloyd, B.S., Tennessee A. and I. State University; M.A., Columbia University; Ph.D., New York University. **Professor of Economics.**
- \*Edna W. Lockert, A.B., Spelman College; M.S., University of Wisconsin. (Residence requirements completed for Ph.D.). **Associate Professor of Psychology.**
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- Lloyd L. Lusk, A.B., Jarvis Christian College; M.S., Indiana University. **Associate Professor of Music.**
- Neal McAlpin, B.S., Tenn. A. and I. State College; M.S., University of Wisconsin; Ph.D., Rutgers. The State University (N.J.). **Associate Professor of Plant Science.**
- Lois C. McDougald, A.B., Livingston College; M.A., Indiana University. **Associate Professor of History.**
- Ruth A. McDowell, B.S., Princess Ann College; M.Ed., Pennsylvania State College. **Associate Professor of Child Development and Director of the Nursery School.**
- Gwen N. McFarland, B.A., M.A., Ph.D., George Peabody College. **Part-time Assistant Professor of Education.**
- Cathryn M. McKinney, B.S., M.S., Tenn. A. and I. State University. **Assistant Professor of Clothing and Textiles.**
- Frederick J. D. McKinney, B.A., M.A., Ball State Teachers College; Ed.D., Indiana University. **Professor of Education.**
- Mohan J. Malkani, B.S., M.S., University of Baroda, (India); M.S., Mississippi State University. **Professor and Head of the Department of Electrical Engineering.**
- John M. Mallette, B.S., Xavier University; M.S., Texas Southern University; Ph.D., Pennsylvania State University. **Professor of Biological Sciences and Chairman of the Graduate Curriculum in the Biological Sciences.**
- Rama I. Mani, B.Sc., Ph.D., University of Bombay. **Associate Professor of Chemistry, Post-doctoral Study: Stanford University, Vanderbilt University, University of Southern California.**

\*On Leave

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- Edward A. Martin, B.S.,** North Carolina Agricultural and Technical College; M.E. Temple University. **Associate Professor of Health, Physical Education and Recreation. Basketball Coach, Grade I.**
- Ruby W. Martin, B.A.,** Bennett College; M.S., South Carolina State College; Ed.D., Syracuse University. **Professor of Reading.**
- Edna C. Masuoka, A.B., M.A.,** Scarritt College; Ph.D., University of North Carolina. **Associate Professor of Sociology.**
- Jitsuichi Masuoka, A.B.,** Emporia College; M.A., University of Hawaii; Ph.D., State University of Iowa. **Professor of Sociology.**
- Robert W. Meadows, B.A.,** George Peabody College; M.S., University of Tennessee. **Instructor in Social Welfare.**
- John A. Merritt, B.S.,** Kentucky State College; M.A., University of Kentucky. **Head Football Coach, Grade I, and Associate Professor of Health, Physical Education and Recreation.**
- Maxine O. Merritt, B.S.,** Jackson State College; M.S., Tennessee A. & I. State University. **Instructor in Health and Physical Education.**
- Merle Miles, B.A.,** Houston-Tillotson College; M.A., Fisk University. **Instructor in Sociology.**
- Jake C. Miller, B.S.,** Bethune-Cookman; M.A., University of Illinois; Ph.D., University of North Carolina. **Part-time Associate Professor of History.**
- Katie Miller, A.B.,** Tougaloo College; M.S., Tenn. A. and I. State University. **Assistant Professor of English.**
- Richard Allen Miller, B.S.,** North Carolina College; M.S., Tenn. A. and I. State University. **Basketball Coach, Grade III, and Assistant Professor of Health, Physical Education and Recreation.**
- \*Tyree Jones Miller, B.S.,** Howard University; M.S., Kansas City University. **Assistant Professor of English.**
- Louis Mishu, B.S.C.E.,** University of Baghdad; M.S.C.E., Ph.D., Purdue University. **Associate Professor of Civil Engineering.**
- E. Preston Mitchell, B.S.,** North Carolina College; M.A., Ph.D., State University of Iowa. **Professor and Head of Department of Health, Physical Education and Recreation.**
- Lula Margaret Moore, B.S.,** Meharry Medical College School of Nursing, M.S., Boston University. **Instructor in Nursing Education.**
- Win Myint, B.E.E.,** M.S., Rensselaer Polytechnic Institute. **Professor of Mathematics.**
- Roger P. Nimmo, B.A.,** Illinois Wesleyan University; LL.B., Vanderbilt University. **Assistant Professor of Business Administration.**
- Roland Norman, B.S., M.S., Ph.D.,** Cornell University. **Professor and Head of the Department of Animal Science.**
- Virginia S. Nyabongo, B.A.,** Bennett College; M.A., Ph.D., University of Wisconsin; Certificat d'Etudes Francaises Diplome d'Etudes Superieures de Phonetique, University of Grenoble, France. **Professor of French.**
- Frank B. Orndorff, B.S.,** M.S., Tenn. A. and I. State University. **Assistant Professor of Mathematics.**
- Edna F. Overall, B.S.,** M.A., Tennessee State University. **Instructor in Health, Physical Education, and Recreation.**
- Daniel E. Owens, B.M.,** West Virginia State College; M.F.A., Carnegie Institute of Technology. **Assistant Professor of Music.**
- Jyotsna Paruchuri, B.A.,** Queen Mary's College; M.A., University of Madras. **Instructor in History and Political Science.**
- Madhusudhana R. Paruchuri, B.A.,** Bsmania University; M.A., Wyoming University. (Residence requirement completed for Ph.D.). **Assistant Professor of Economics.**
- Gretchen B. Payne, A.B.,** University of Denver; M.A., University of Colorado; Ed.S., George Peabody College. **Assistant Professor of Education.**
- Joseph A. Payne, A.B.,** Kentucky State College; M.S., Ed.D., Indiana University. **Professor of Education and Dean of Student Affairs.**
- Tee B. Peacock, B.S.,** M.S., Tenn. A. and I. State University. **Instructor in Elementary Education.**
- Harriet Annetta Peterson, A.B.,** Fisk University; M.S., Tennessee State University. **Assistant Professor of History.**
- Harold L. Phelps, B.S.,** M.S., Tenn. A. and I. State University. **Associate Professor of Psychology.**

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- Kathleen H. Poag**, B.S., Ohio State University; M.S., Tenn. A. and I. State College. **Associate Professor of Sociology.**
- Thomas E. Poag**, A.B., Morgan State College; M.A., Ohio State University; Ph.D., Cornell University. **Professor and Head of the Department of Speech and Drama and Dean of the School of Arts and Sciences.**
- Ruth M. Powell**, A.B., Johnson C. Smith University; M.S., Tenn. A. and I. State University. **Assistant Professor of Education.**
- Audrey M. Prather**, B.S., North Carolina College; M.S., Tuskegee Institute. **Assistant Professor of Chemistry.**
- H. Leon Prather**, A.B., South Carolina State College; M.A., Ph.D., New York University. **Professor of History.**
- Frank D. Purnell**, B.A., Alcorn A. and M. College; M.S., Ed.D., University of Oklahoma. **Associate Professor of Health, Physical Education and Recreation and Chairman of Lower Division of Department of Health, Physical Education and Recreation.**
- Charles A. Ramsey, II**, B.A., M.A., North Carolina College at Durham. **Assistant Professor of Social Sciences.**
- William J. Ransbottom**, B.A. and B.S., Ohio State University; Diplôme Supérieur, University of Paris; M.A.T., Purdue University. **Assistant Professor of French.**
- Lillie B. Redmond**, B.S., M.S., Tennessee A. and I. State College; M.S., Pennsylvania State University. **Assistant Professor of Home Management.**
- Elizabeth Covington Reed**, B.S., Fayetteville State Teachers College; M.A., Teachers College, Columbia University; Ed.S., Peabody College. **Assistant Professor of Education.**
- Charlotte Ann Rhodes**, B.S., Tennessee A. and I. State University; M.M., University of Cincinnati. **Instructor in Music.**
- \***Ernest Cornell Rhodes**, B.S., Tennessee A. & I. State University; M.A., Fisk University. **Instructor in Sociology.**
- Gregory D. Ridley, Jr.**, B.S., Tennessee A. and I. State University; M.A., University of Louisville. **Assistant Professor of Art.**
- Robert L. Ritter, Jr.**, B.S., University of Wisconsin; M.Ed., Loyola University of Los Angeles. **Assistant Professor of Reading.**
- Marion T. Roberts**, A.B., Philander Smith College; M.A., George Peabody College for Teachers. **Assistant Professor of Library Science.**
- Camille D. Robinson**, B.S., M.S., Tenn. A. and I. State University. **Assistant Professor of Business Education.**
- Marcus M. Rowland**, A.B., Clark College; M.Mus., University of Michigan. **Assistant Professor of Music.**
- Nora L. Roy**, A.B., Ohio State University; M.A., Tenn. A. and I. State College. **Assistant Professor of Sociology.**
- Juda E. Rozenberg**, B.S., M.S., The University of the City of New York; Ph.D., University of Notre Dame. **Associate Professor of Civil Engineering.**
- Andrew J. Ryal**, B.S., M.S., Tennessee A. & I. State University. **Assistant Professor of Industrial Education.**
- Cecil M. Ryan**, B.S., Langston University; C.F.I., United States Department of Commerce; M.S., Tenn. A. and I. State College. **Assistant Professor of Aeronautics.**
- Tommie Marie Samkange**, B.S., Tougaloo College; M.S., Ph.D., Indiana University. **Professor of Psychology.**
- Dorothy I. J. Samuel**, B.S., Virginia Union University; M.A., Atlanta University. **Associate Professor of English.**
- Vassudeo M. Sardessai**, B.A., Bombay University; M.B.A., North Texas State University. **Instructor in Business Administration.**
- Annie G. H. Sasser**, B.S., Shaw University; M.S., Prairie View College. **Associate Professor of Mathematics and Director of Career Counseling and Placement Bureau.**
- Donald D. Savoy**, B.S., M.S., Ohio State University. **Professor of Physics.**
- Mingo Scott**, B.S., M.S., Tenn. A. and I. State College. **Assistant Professor in History.**
- Gilbert W. Senter**, B.S., M.S., Tenn. A. and I. State College. **Associate Professor of Chemistry.**
- Ingrid A. Sevin**, B.A., M.A., University of Washington. **Part-Time Instructor in German.**
- Samuel H. Shannon**, B.A., Vanderbilt University; M.A., George Peabody College. **Assistant Professor of History.**

\*On Leave



- Solomon N. Shannon, A.B.,** Mississippi Industrial College; M.A., Fisk University; M.A., Columbia University; Ph.D., North Carolina College at Durham. **Associate Professor of Secondary Education.**
- John H. Sharpe, M.Mus.,** Howard University; M.Mus., Union Theological Seminary. **Professor of Music and University Organist.**
- Phyllis C. Shutt, B.A.,** Carson and Newman College; M.S., Ed.D., University of Tennessee. **Part-Time Associate Professor of Education.**
- Arthur E. Simmons, B.S.,** Tenn. A and I. State University; M.S., Indiana University. **Associate Professor of Health, Physical Education and Recreation.**
- \*Doris E. Simmons, B.S., M.S.,** Tenn. A. and I. State University. **Assistant Professor of Chemistry.**
- Gwendolyn Simmons, B.S.,** Alabama State College; M.S., University of Pennsylvania. **Instructor in Education.**
- Muriel H. Simmons, B.S., M.S.,** Tennessee A. and I. State University; Ed.S., George Peabody College for Teachers. **Assistant Professor of Education.**
- William J. Simmons, A.B.,** Lincoln University (Pa.); B.D., Union Theological Seminary; M.A., Columbia University; D.D., Monrovia College, Liberia, West Africa. **Professor of Philosophy.**
- Lula G. Simpson, B.S.,** Alabama State College; M.A., Teachers College of Columbia University. **Instructor in Music.**
- Ralph R. Simpson, B.S.,** Alabama State College; M.A., Columbia University; Ph.D., Michigan State University. **Professor of Music.**
- Alice Smith, A.B.,** Tougaloo College; M.S., Tennessee State University. **Instructor in Biology.**
- Bertha R. Smith, B.S.,** Tennessee State University; M.A., Peabody College. **Part-Time Assistant Professor of Speech Correction.**
- Frederick D. Smith, B.S.,** Prairie View State College; M.S., D.V.M., Michigan State University. **Professor of Biology.**
- William O. Smith, B.S., M.A.,** New York University; Ph.D., State University of Iowa. **Professor of Music.**
- Asalean Springfield, A.B.,** Eastern Michigan University; M.A., Tennessee A. and I. State University. **Instructor in English.**
- Alonzo T. Stephens, A.B.,** Florida A. and M. University; M.Litt., Ph.D., University of Pittsburgh. **Professor of History and Head of Department of History and Political Science.**
- Dorothy A. Stephens, A.B., B.S.L.S.,** North Carolina College; M.A., New York University. **Assistant Professor of Social Sciences.**
- Preston E. Stewart, B.S.,** South Carolina State College; M.S., Tenn. A. and I. State College. **Associate Professor of Industrial Education.**
- Mary E. Stewart, B.S.,** Kentucky State College; M.A., Fisk University. **Instructor in English.**
- Thurman E. Stewart, B.S., M.S.,** University of Kentucky. **Assistant Professor of Physics.**
- William D. Stinson, B.S.,** Tenn. A. and I. State College; M.A., New York University. **Assistant Professor in Business Education and Manager of Computer Operations.**
- Carol E. Stone, B.A.,** Fisk University; M.M., (Residence requirements completed for Ph.D. degree) Indiana University. **Assistant Professor of Music.**
- Charles William Sutherland, B.E.,** Vanderbilt University; M.S., University of Wisconsin. **Associate Professor of Mechanical Engineering.**
- Robert M. Tanner, B.S., M.S., Ph.D.,** Stanford University. **Assistant Professor of Electrical Engineering.**
- Joe R. Taylor, Jr., B.S.,** Belmont College. **Part-Time Instructor in Data Processing.**
- Helen N. Teague, B.S.,** Kentucky State College; M.S., Ph.D., Indiana University. **Associate Professor of Secondary Education.**
- Gul M. Telwar, B.S.,** University of Kabul; B.S., M.S., University of Wyoming; Ed.D., Oklahoma State University. **Associate Professor and Head of the Department of Agricultural Education.**
- Edward S. Temple, B.S., M.S.,** Tenn. A. and I. State University. **Head Track Coach (Women's), Grade I, and Associate Professor of Sociology.**
- Chris L. Terrill, B.S.,** Case Institute of Technology; Ph.D., Case Western Reserve University. **Associate Professor of Science Education.**
- Early J. Thornton, B.S.,** Tuskegee Institute; M.S., Massachusetts State College. **Professor of Poultry Husbandry.**
- William H. Thorpe, B.S.,** Tuskegee Institute; M.S., University of North Dakota; Major, USAF. **Professor of Aerospace Studies.**
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- Miriam G. Towns**, B.S., Framingham State Teachers College; M.S., Cornell University. **Associate Professor of Foods and Nutrition.**
- Mattie B. Turner**, B.S., Tennessee A. and I. State University; M.A., Fisk University. **Instructor in English.**
- Alfred C. Tyler**, A.B., Morehouse College; M.A., Columbia University. **Associate Professor of Chemistry.**
- Joseph H. Udelson**, A.B., Bradley University; M.A., University of Michigan. **Assistant Professor of History.**
- \*Betty Van Buren**, B.S., M.S., Tennessee A. and I. State University. **Assistant Professor of Speech and Drama.**
- Walter Vincent**, B.S., Tennessee A. and I. State University. **Instructor in Architectural Engineering.**
- Lois Boston Walker**, B.A., M.A., Fisk University. **Assistant Professor of Psychology.**
- Kou-Ling Wang**, B.S., Taiwan, Taiwan, China. Studying in Doctoral Program, Vanderbilt University. **Instructor in Physics.**
- Mary Belle S. Watkins**, B.S., M.S., Tennessee A. and I. State University. **Instructor in Physical Education.**
- Sherman Webster**, A.B., South Carolina State College; M.A., New York University; Ed.D., Indiana University. **Professor and Head of the Department of Sociology.**
- Alexander C. Wells**, B.S., M.S., Tennessee A. and I. State University. **Assistant Professor of Biology.**
- Fred E. Westbrook**, B.S., M.S., Tenn. A. and I. State College; Ph.D., Michigan State University. **Professor and Head of the Department of Plant Science.**
- Vesta R. Wheaton**, B.S., M.A., Tenn. A. and I. State University. **Assistant Professor of English.**
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- McDonald Williams**, A.B., Litt.M., University of Pittsburgh; Ph.D., Ohio State University. **Professor of English and Director of the Honors Program.**
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## 1971-72 University Calendar

### Fall Quarter 1971

September 6	Wednesday	Last date to receive applications and transcripts for Fall Quarter.
September 15	Wednesday	Residence halls opened for Freshmen only—8 a.m.
September 16	Thursday	Convocation for Freshmen and New Students—10 a.m.
September 17-20	Friday-Monday	Registration for Freshmen and New Students.
September 20	Monday	Residence halls opened for Upperclassmen and Graduate Students.
September 21-22	Tuesday-Wednesday	Registration for Upperclassmen and Graduate Students.
September 23	Thursday	Classes begin at 8 a.m.
October 8	Friday	Opening Convocation for the University at 10 a.m.
November 1-2	Monday-Tuesday	Mid-Term Examinations.
November 25-26	Thursday-Friday	Thanksgiving Holidays.
December 6	Monday	Last date to receive applications and transcripts for Winter Quarter.
December 13-16	Monday-Thursday	Final Examinations, Fall Quarter.
December 17	Thursday	Christmas Recess begins after last scheduled examination.

### Winter Quarter 1972

January 3-4	Monday-Tuesday	Registration for Winter Quarter.
January 5	Wednesday	Classes begin at 8 a.m.
February 3-4	Thursday-Friday	Mid-term Examinations.
March 6	Monday	Last date to receive applications and transcripts for Spring Quarter.
March 7-10	Tuesday-Friday	Final Examinations, Winter Quarter.
March 13-17	Monday-Friday	Spring Recess.

### Spring Quarter 1972

March 20-21	Monday-Tuesday	Registration for Spring Quarter.
March 22	Wednesday	Classes begin at 8 a.m.
April 20-21	Thursday-Friday	Mid-Term Examinations.
May 29-June 1	Monday-Thursday	Final Examinations, Spring Quarter.
June 2	Friday	Commencement Exercises.

### Summer Quarter—First Term

June 1	Thursday	Last date to receive applications and transcripts for Summer I Session.
June 12	Monday	Registration, Summer I Session.
June 13	Tuesday	Classes begin at 8 a.m.
July 4	Tuesday	Holiday, Independence Day.
July 14-15	Friday-Saturday	Examinations, Summer I Session.

### Summer Quarter—Second Term

July 3	Monday	Last date to receive applications and transcripts for Summer II Session.
July 17	Monday	Registration, Summer II Session.
July 18	Tuesday	Classes begin at 8 a.m.
August 16-17	Wednesday-Thursday	Examinations, Summer II Session.
August 18	Friday	Commencement Exercises.

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